

UGrokkit[®]

Discover Grok 2.0 for iOS User's Manual



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The basics



Welcome to *Discover Grok 2.0*. Discover Grok now has more features including:

- Store and sync your data across multiple iOS devices in the U Grok It Cloud
- Associate as much data with each tagged item as you want with multiple user-definable fields
- Integrate U Grok It data with your company data via CSV import/export
- Identify as well as inventory (count) and locate tagged items
- Automatically record the most recent time each item is scanned
- Filter U Grok It data along different parameters

What is Discover Grok 2.0?

Discover Grok is an iOS[®] app for use with the U Grok It RFID reader (the Grokker). With Discover Grok, you can use your iOS device and a Grokker to identify, locate, track and inventory items that are tagged with UHF Gen 2 RFID tags. Designed to be used in a variety of situations, Discover Grok can be used as a solution for some organizations, or as a proof of concept for those who want to develop custom apps.

Downloading the Discover Grok 2.0 app

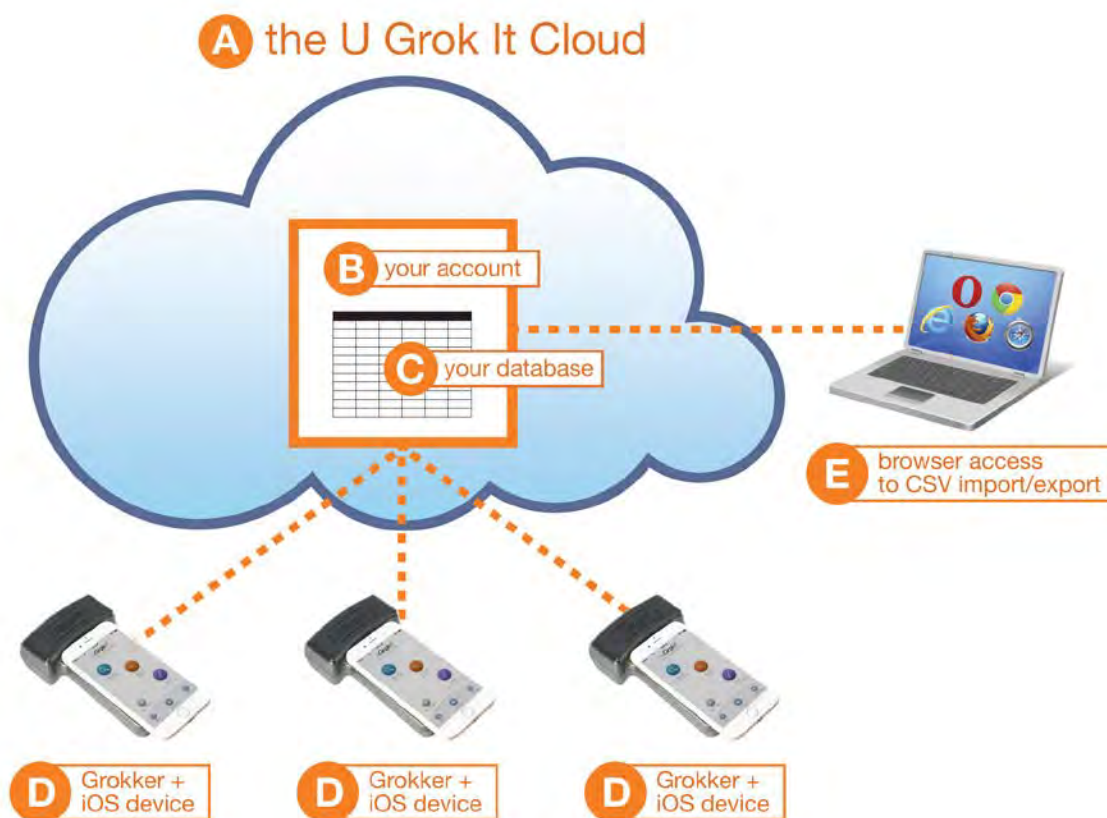
The iOS version of Discover Grok is available in the App Store (you can get to that store page directly via the link on our home page at www.ugrokit.com or by searching the app store for Discover Grok).

First steps for using the Grokker

1. Fully charge your Grokker before use. The charging port is the mini-USB port located on the bottom of the Grokker handle. Your Grokker comes with a USB charging cable and wall charger; if you're using a different USB wall adapter, for best results use an output 5V, 2 amp or greater wall charger.
2. Leave the Grokker plugged in for at least 2 hours.
3. Disconnect the charger. You're now ready to use the Grokker to scan UHF RFID tags.
4. Place your iOS device on the Grokker with the audio port on the bottom.
5. You may optionally secure it with the silicone retention strap (aka rubber band) on the Grokker.
6. Connect the Grokker's audio cable to the iOS device's audio port. For some devices (such as the iPhone 4), this means putting the iOS device upside down. Don't worry: Discover Grok will flip the app when you start it so everything will be right side up. If the screen doesn't flip, just hold the iOS device and Grokker vertically for a second so it knows which way is up, and the screen will flip. NOTE: in order for the screen to flip, you must unlock orientation/enable rotation on your device.
7. Hold both the Grokker and your iOS device with one hand (Grokker in your palm, fingers reaching up to hold your iOS device).
8. Start Discover Grok.

9. When scanning for tags, move the Grokker gently while you walk around. Move your arm up and down and side to side and also turn your wrist some. This will maximize the Grokker's ability to find tags at all orientations.
10. NOTE: The Grokker has its own battery power, which means it won't run down the power on your phone. It turns on when you connect the audio jack. To improve battery life of the Grokker, simply remove the jack from the phone's audio port when you aren't using the Grokker.

System overview



Discover Grok 2.0 consists of the U Grok It Cloud (A), your U Grok It Cloud account (B), your U Grok It Cloud database (C), iOS devices with the Discover Grok 2.0 app for iOS (D), and Browser Access for CSV Import/Export (E). Each component is described below.

A) The U Grok It Cloud

With Discover Grok 2.0, we introduce the U Grok It Cloud that allows you to store your U Grok It data on our servers for backup and synchronization between multiple iOS devices. For a limited time, there is no charge for this service.

B) Your account

When you register with U Grok It, you will create an account in the U Grok It Cloud. Each account holds a single database (see C below). To have multiple iOS devices share and sync the same data, they all need to log in to the same account.

C) Your database

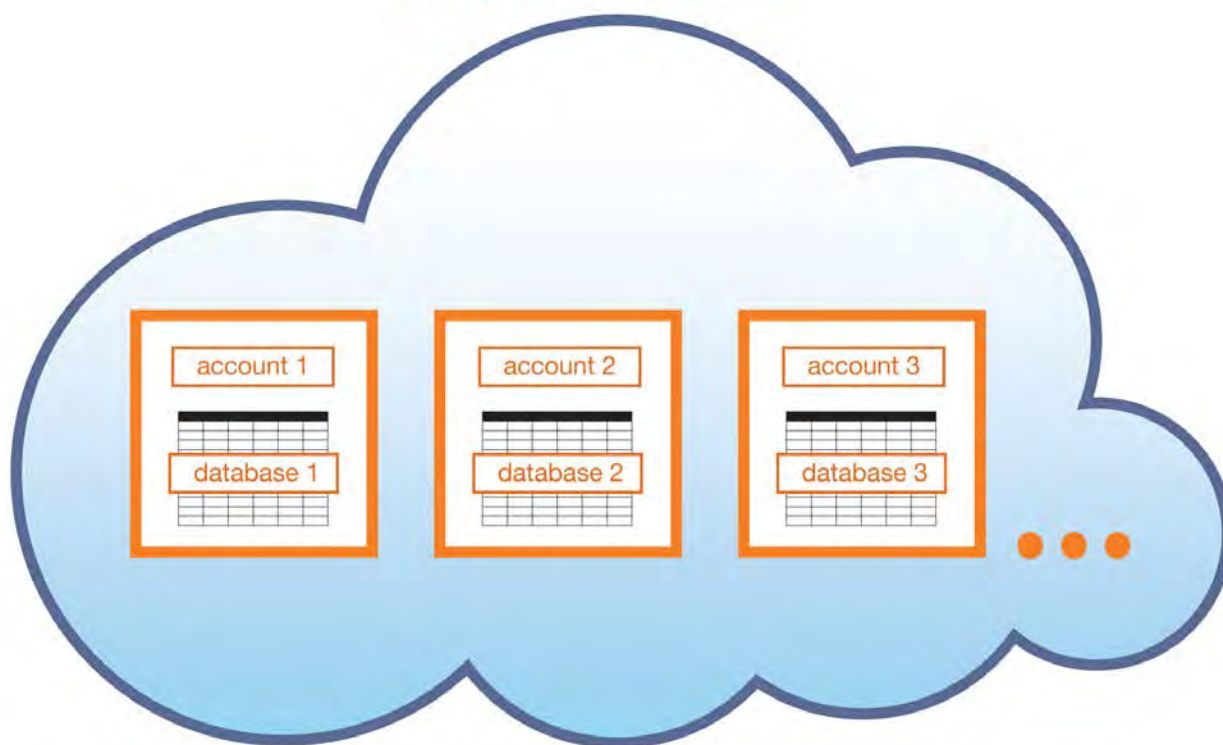
Your database is stored in your account on the U Grok It Cloud and synchronized with your local Discover Grok database of any iOS device that logs in to your account through the Discover Grok 2.0 app. When you scan items with your Grokker, any new data is automatically synced with your U Grok It Cloud database. If multiple people are logged in to your account and scanning with their Grokkers, all their data is synced to your U Grok It Cloud database and to all the iOS devices using your account.

If you are not connected when scanning with your Grokker (via WiFi or Cellular), your data is stored in your local Discover Grok database on your iOS device and then synced with your U Grok It Cloud database once your iOS device is connected to a WiFi or Cellular network.

If you want to use Discover Grok 2.0 with a new iOS device, just log in to your account and your U Grok It Cloud database will be synced with your local Discover Grok database, then you can get Grokking.

Your default U Grok It Cloud database has three system fields (EPC, Image, and Last Scanned) and one user-defined field (Name). You may modify the Name field and/or add any number of fields to the database that you want to associate with your tagged items. Fields can contain either text or a list of choices. There are two ways to modify the structure of your database: in the Discover Grok iOS app, or through CSV Import/Export. If you want to have multiple databases of tagged items, you will need to have multiple accounts (one account = one database). When you log out of one account in the Discover Grok 2.0 iOS app, the local Discover Grok database will be erased and when you log in to another account, the local Discover Grok database will be synced to the account you have logged into.

the U Grok It Cloud



D) iOS devices with the Discover Grok 2.0 app

To connect your iOS device to your U Grok It Cloud account, log in to your account in Discover Grok 2.0 iOS. Any number of iOS devices can log in to the same account and share and sync data.

If you run Discover Grok 2.0 on your iOS device and do not log in to an account, you will not be connected to any account in the U Grok It Cloud; your data will only be stored in the local Discover Grok database on your iOS device.

E) Browser access to CSV import/export

You can integrate your U Grok It data with your existing company data via CSV Import/Export. When you format your company data into a CSV (Comma Separated Value) file and import it into your account in the U Grok It Cloud, that data will replace your U Grok It Cloud Database and then sync to any iOS device that logs in to your account. To get your U Grok It data into your company database, you can export your U Grok It Cloud database to a CSV file.

You can also use CSV import to define the structure of your U Grok It Cloud database by creating a CSV file of fields with no data and then importing that CSV file into your U Grok It Cloud database from your browser.

How to create a U Grok It Cloud account and database

Each U Grok It Cloud account contains a single database. Once you have registered an account, you can access that database by logging in to Discover Grok using the account email and password.

Multiple people can share access to each database by logging in to the same U Grok It Cloud account.


You can create a U Grok It Cloud account directly from Discover Grok or from the U Grok It website at login.ugrokit.com.

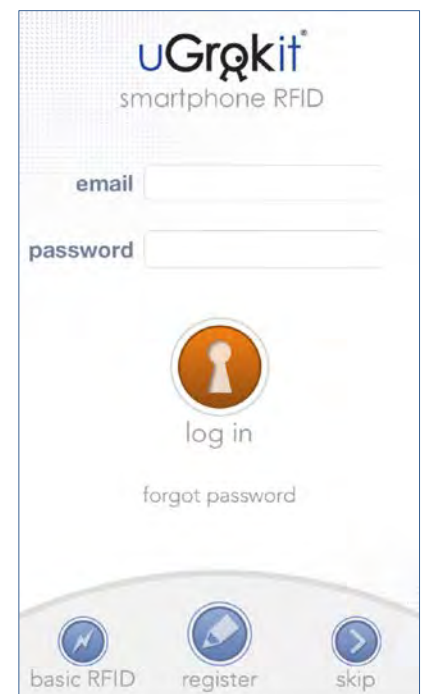
From the Discover Grok app

The first time you use Discover Grok

The first time you use Discover Grok, you will see the Log In screen. To register a new account:



1. Tap the “register” button.
2. Enter an email address and password for the account, agree to the terms of service and tap “register” (if the keyboard is covering register, touch any blank part of the screen and the keyboard will disappear).
3. The “verify email” screen will appear, and a verification email will be sent to the email address you entered.
4. Open the email and click on the provided link to validate your account.
5. In Discover Grok, click “continue” after you have verified the email (if you verify email on the same device on which you have Discover Grok, it automatically returns to Discover Grok and moves to the next screen). Your U Grok It Cloud account and database are now ready to use.
6. Tap  Fields to modify your database structure or tap Home to use your database.



If you skipped registration earlier

If you tapped the “skip” button when you used Discover Grok, you can create your U Grok It Cloud account and database later. To do this:



1. Tap “settings” on the Discover Grok home screen.
2. Tap the “register” button.
3. Follow the steps above.

From the ugrokit.com website

You can also create an account directly on the U Grok It website. To do so:

1. Go to login.ugrokit.com
2. Click on the “Register here!” link
3. Enter an email address and password for the account, agree to the terms of service and click the “register new account” button.
4. Check your email for the verification email that was sent to the email address you entered. Open that email and click on the “Verify Email” link.
5. Your U Grok It Cloud account and database are ready to use.

Logging in to your U Grok It Cloud database

You must be logged in to your U Grok It Cloud database in order to create, modify, or scan items in that database.

If you do not yet have a U Grok It Cloud account, you should first [create an account](#).

Logging in

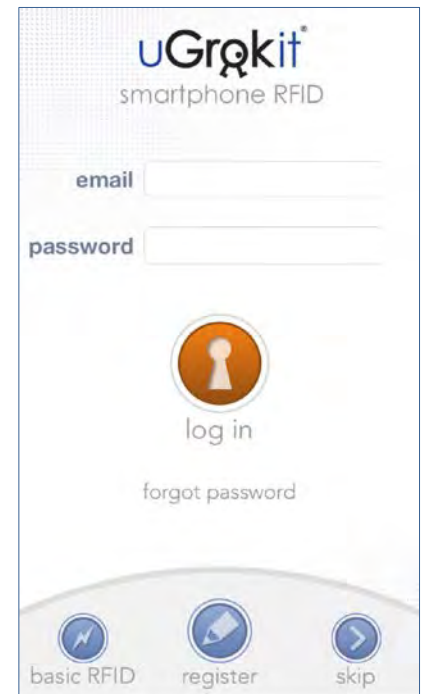
If you are not already logged in and you have not skipped logging in, you will see the Log In screen when you start Discover Grok. To log in:

1. Enter the email address associated with your U Grok It Cloud account and enter your password.
2. Tap the “log in” button.

Logging in to a different account

If you are already logged in to a U Grok It account and want to log in to a different account, you must first log out, then log in to the other account:

1. Tap “settings” on the home screen. The Settings screen will show the name of the account to which you are currently logged in.
2. Tap “log out.” The Log in screen will appear.
3. Follow the instructions above to log in to your other account.



Logging in after skipping Login

You can skip logging in by tapping “skip” on the Log In screen, which allows you to explore using your Grokker without creating an account, such as by using the [Basic RFID](#) features. If you later want to log in to a U Grok It database account, follow these steps:

1. Tap “settings” on the home screen.
2. Tap “log in.”
 - a. If you have added database items after skipping login, you will see a message warning you that these items will be deleted unless you register a new account to hold those items.
 - i. Tap “register” to create a new account for those items.
 - ii. Tap “log in” and follow the instructions above to log in to an account (which will delete your local items).
 - iii. Tap “cancel” to close the message box without registering or logging in.
 - b. If you did not add any database items after skipping login, you will see the Log In screen. Follow the instructions above to log in to your account.



Using your Grokker

Charging your Grokker

Your Grokker comes with a USB charging cable and wall charger.

To charge your Grokker:

1. Connect the mini-USB plug of the charging cable to the charging port of your Grokker. The charging port is the mini-USB port located on the bottom of the Grokker handle.
2. Connect the USB end of the charging cable either to the included wall charger and plug into a 120-volt outlet or plug the USB end of the charging cable directly to the USB port on a computer.
 - If you wish to use a different USB wall charger, for best results use an output 5V, 2 amp or greater wall charger.
3. Leave the Grokker plugged in for at least 2 hours.
 - Note: the Grokker has no charging indicator. To see if it is fully charged, see “Checking your Grokker’s battery level” below.
4. Disconnect the charger from your Grokker.

Maximizing your Grokker’s battery charge

The Grokker has its own battery power, which means it won’t run down the power on your phone. It turns on when you connect the audio jack. To improve battery life of the Grokker, simply remove the jack from the phone’s audio port when you are not using the Grokker.

Checking your Grokker’s battery level

To check the battery power:

1. Connect your iOS device to the Grokker.
2. If your charger is connected to the Grokker, disconnect the charger.
 - If charger is connected, the battery level will only indicate, “charging.”
3. Start Discover Grok. Your Grokker should connect.
 - Note: If you see a dialog box that says “Please connect your Grokker” when your Grokker is already connected, you may have no charge left. Please plug your Grokker in for at least an hour.
4. Tap “settings.”
5. Tap “Battery Level” to see the approximate percentage charge of the Grokker.
6. Fully charging your Grokker takes 2-3 hours.
7. If after removing the case and charging the Grokker it still will not connect, please contact support at techsupport@ugrokit.com.



How to hold and move the Grokker while scanning

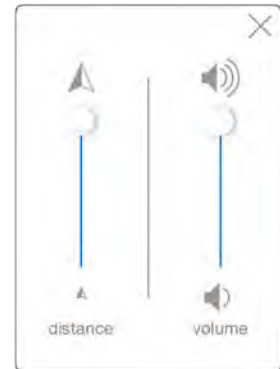
When scanning for tags, move the Grokker gently while you walk around. Move your arm up and down and side to side and also turn your wrist some. This will maximize the Grokker’s ability to find tags at all orientations.

Setting the scanning distance on your Grokker

You can change the distance at which your Grokker scans tags. If you want to scan as many tags as possible at the Grokker's largest distance, you can keep the distance at the default (its maximum). If you want to reduce the number of tags the Grokker finds (such as when you want to identify a tagged object but the tags of nearby items are also showing up in the scan) you can reduce your Grokker's scanning distance.

To change the distance at which your Grokker scans:

1. Connect your iOS device to the Grokker.
2. Start Discover Grok.
3. Tap "identify", "locate", or "count."
4. Tap the Scan Settings button  in the upper right of the screen.
5. Slide the "distance" slider to a different setting.
6. Tap the "x" button.
7. If you have reduced the distance setting below its maximum, the "scan settings" button will now appear with an exclamation point to remind you that you've reduced the scan distance setting: 



Understanding the U Grok It Database



Your database in the Cloud, synchronized with all your devices

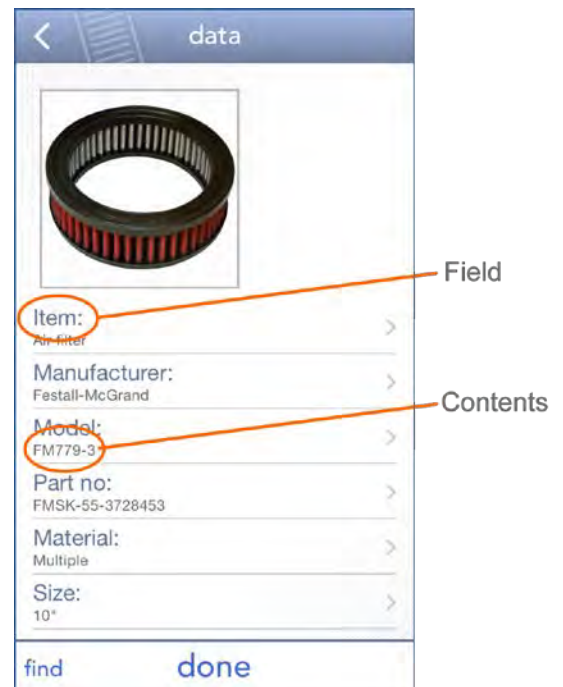
Your U Grok It account is a database in the Cloud. It is synchronized to any iOS device that logs in to your account using Discover Grok. Any items in the database that you scan with your Grokker or modify are updated automatically in the Cloud (when you have WiFi or cellular connectivity) and are updated automatically on any other iOS devices logged in to the same account in Discover Grok.

Database basics

Your U Grok It database is where you'll put all the information about the items you want to track with your Grokker. Each item you enter in the database contains information about that item in *fields* that have different *contents*.

Fields are the main structural element of your database. A field is a category where you collect and track information about each item, such as its name, its owner, what materials it is made of, where it is stored, or when it is due for service. *Contents* are the specific details you enter into each field for each item in the database. For instance, if your database has the fields: Name, Model, and Size, then the contents you might enter for the new air filter you add to the database might be:

Name = Air Filter
Model = FM779-3
Size = 10"



Your database has default fields

Your new U Grok It account starts with a database that has certain fields in it by default, one of which is *user defined* (meaning you can modify or delete it and its contents) and three of which are *system* fields (meaning you cannot modify or delete them). Those default fields are:

- One user defined field:
 - **Name:** a text field for the name of each item. You can modify this field if you like: you can change the title of the field from “Name” to anything else, you can change what type of field it is (see below for more information on types of fields), and you can modify the contents in this field.
- Three system fields:
 - **Image:** a field that contains an image of each item. You cannot modify or rename this field, it can only be used to hold images.

- **Last scanned:** a field that Discover Grok uses to automatically track the last time each item in your database is scanned using a Grokker. You cannot modify or rename this field.
- **EPC:** a field that contains the unique tag number of the RFID tag that you associate with each item in the database. This tag number is referred to as the “EPC” or “Electronic Product Code.” You can change the values in this field, but you cannot modify or rename the field itself.

If these are all the fields you need to use, then you won’t need to modify the structure of your database – you can go ahead and start populating your database with items and their data.

Building your database

If you want to track more information about the items in your database than those provided by the default fields, you’ll need to add more fields.

Types of fields

Each user-defined field in your database can be one of two types:

1. **Text field.** This is the default type of field in Discover Grok. It allows you to enter any kind of information in a field, including numbers, letters, long strings of text, or any other information. A text field allows you the most flexibility when entering information about an item, because you are not limited by pre-selected choices. However, since it allows so much flexibility it is not a good choice when you need to make sure that information is entered consistently. In that case you should use a list field.
2. **List field.** This type of field allows you to restrict the choices for a field to ones you specify. A list field ensures that entries are consistent across items in your database, so you can later search for those items by using one of the choices in the list, and you don’t have to worry that you miss any items where the choice was misspelled. In a field named “Owner,” for instance, you might want to make sure that each time “Sheila” is entered it is always spelled correctly, so that later when you search for all items belonging to Sheila you don’t accidentally miss items that were listed as belonging to “Shiela” or “Shleia.” Items in a list field show up in a list for the user to select from in Discover Grok.

Using user-defined fields

User-defined fields need the following information to identify the field, and to define rules for the field’s data:

- The field’s **name**,
- The field’s data **type**,
- An optional flag to indicate the field is **required** to have data in it,
- If the field data type is “List”
 - the **choices** of data that the field is allowed to have.
 - an optional **default** choice for the field

Name

A field’s name is shown to users in the app to indicate the information the field holds.

Examples of field names are “Color”, “Street address”, “ZIP code”, or “Notes.” A Name field

can be up to 255 characters long. You can use any characters (including spaces) in a Name field name except the following three marks: | (vertical bar) : (colon) and ; (semicolon).

Type

There are two field types: **Text** and **List**. A Text field contains plain text, up to 10,000 characters. Any character is allowed in a Text field.

A List field is similar to a Text field, except that you limit the possible entries into the field to a predefined set of **choices**. For example, if you know that the only valid values for a field are “Yes” and “No” (and not “Yep” or “Nope”, as would be possible in a String field), you can define the field as a List with the choices set to “Yes” and “No.” A List field appears in Discover Grok as a scrollable list of these predefined choices.

Required

If you require a field to have a value in it (not be blank) then set the Required flag. For example, set the Required field if the “Model” field must have text in it, or if the “Owner” field must have one of the list choices in it.

Choices

If a field’s type is List, you define a list of possible choices. These choices are text values that you set when defining the field. You can change the choices later, including deleting from, adding to, or rearranging the list of choices. For example, if you have a product that comes in three colors, you can create a List field with choices of “Blue”, “Gold”, and “Silver.” Those will be the only options the user can select for that field, unless you later change them.

Default

If a field’s type is List, you can mark one of the list choices as the default. If set, this choice is automatically placed in the field when a new item is created in Discover Grok.

Working with your database from Discover Grok

You can modify both the structure and the content of your database from within Discover Grok 2.0. This section assumes you have read [Understanding the U Grok It Database](#).


Modifying the structure of your database

The structure of your database defines what fields are available to store content.

Adding a Text field to your database

To create a new text field:






1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the “add field” button at the bottom of the screen.
4. Enter a name for this new field. Each field must have a unique name.
NOTE: you cannot use the characters “|” (the vertical bar), “:” (colon), or “;” (semicolon) in a field’s name.
5. Enter a description for this field. Entering information in this field is optional. This is a useful field to enter information about the field that you or anyone else using this database will find helpful, such as instructions on exactly what kind of information you want to have stored in this field.
6. If this field will contain information that must be included for each item, tap the “required” on/off button to turn it on. It will turn green to show that it is on.
7. “Text” is the default type of field in Discover Grok, so you don’t need to change the type.
8. Tap “save” at the bottom of the screen to save this field.
9. Repeat these steps to add other Text fields to your database.

A screenshot of the "fields" screen in the Discover Grok application. The screen has a blue header with a back arrow and the word "fields". Below the header are four input fields: "name:", "description:", "required:" (with a toggle switch), and "type:" (with "text" and "list" buttons). At the bottom of the screen are two buttons: "discard" and "save".

Adding a List field to your database

To create a new list field:



1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the “add field” button at the bottom of the screen.
4. Enter a name for this new field. Each field must have a unique name.
NOTE: you cannot use the characters “|” (the vertical bar), “:” (colon), or “;” (semicolon) in a field’s name.
5. Enter a description for this field. Entering information in this field is optional. This is a useful field to enter information about the field that you or anyone else using this database will find helpful, such as instructions on exactly what kind of information you want to have stored in this field.
6. If this field will contain information that must be included for each item, tap the “required” on/off button to turn it on. It will turn green to show that it is on.
7. To choose List field for the type, tap “list” so it turns blue. The “list choices” section will appear, where you will specify the choices for this field.
8. Tap the “+” button to create the first list choice for this field. A message box will appear.
9. Enter the name of the first list choice.
NOTE: you cannot use the characters “|” (the vertical bar), “:” (colon), or “;” (semicolon) in a list choice.
10. If you’d like this list choice to be the default choice for all items you add to the database, tap the “set as default” button to turn it on. (You can change this later at any time.)
11. Tap “add” to add this choice to the list of choices.
12. Repeat those steps to add more list choices.
13. To reorganize the order in which a choice appears in the list, tap and hold the “reorder” button  to the right of that choice, then slide it up or down to its new position.
14. To remove a choice, tap the “delete” button  to the left of that choice.
15. When you’re done, tap “save.”



A screenshot of the "fields" screen in the Discover Grok app. The screen has a blue header with a back arrow and the word "fields". Below the header are several input fields: "name:" with a text input field, "description:" with a text input field, "required:" with a toggle switch, and "type:" with two buttons: "text" (white) and "list" (blue). At the bottom of the screen are two buttons: "discard" and "save".

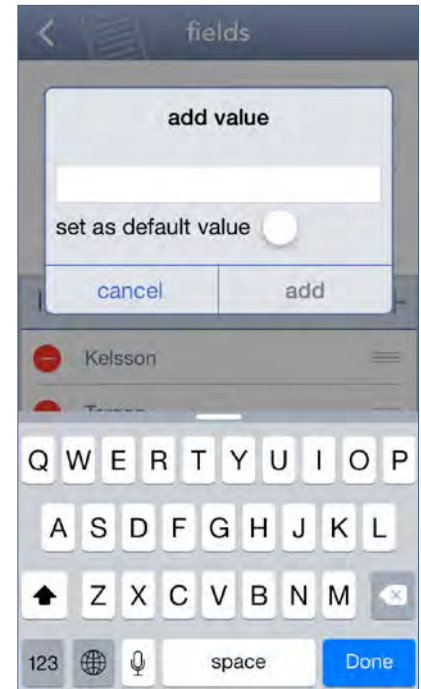
Modifying the choices in a list field

You can, at any time, add, delete, or modify the available choices in a list field.

Adding a choice to a list field

To add a choice to a list field:


1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the name of the list field to which you want to add the new choice.
4. Tap the “+” button in the “list choices” bar.
5. Enter the name of the new choice.
NOTE: you cannot use the characters “|” (the vertical bar), “:” (colon), or “;” (semicolon) in a list choice.
6. Tap “set as default value” if you want this to be the default value for this list.
7. Tap “add.”
8. Your new choice appears in the list.
9. To reorganize the order in which the choices appear in the list, tap and hold the “reorder” icon  to the right of each item, then slide it up or down to its new position.
10. When you’re done, tap “save.”

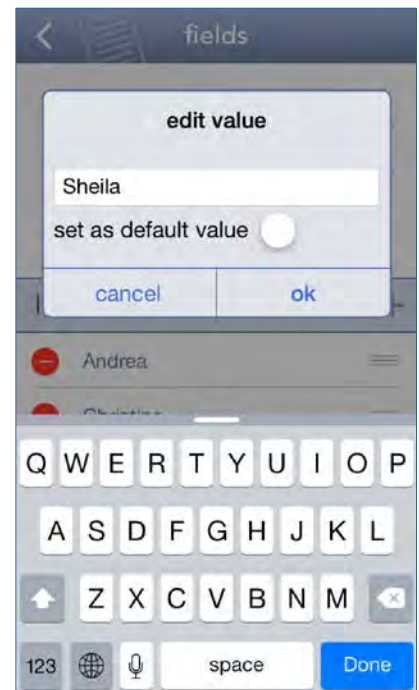


Modifying a choice in a list field

You can modify a choice in a list field. **NOTE:** when you modify a choice, it will change in the database entry for every item in your database that uses that choice. For instance, if you have an “Owner” field that offers the choice “Sheila” and you change that choice to “Sheila Jones”, every item in your database with the Owner field as “Sheila” will be updated to “Sheila Jones.”

To modify a choice in a list field:



1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the name of the list field in which you want to modify the choice.
4. Tap the name of the choice in the list that you want to modify.
5. Edit the name of the choice.
NOTE: you cannot use the characters “|” (the vertical bar), “:” (colon), or “;” (semicolon) in a list choice.
6. Tap “ok.”
7. The modified choice appears in the list.
8. When you’re done, tap “save.”



Changing the order of choices in a list field

To change the order in which choices appear in a list field:





1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the name of the list field in which you want to change the order of the choices.
4. Tap and hold the “reorder” icon  to the right of the choice, then slide it up or down to its new position.
5. When you’re done, tap “save.”

Deleting a choice from a list field

You can delete a choice from a list field. **NOTE:** when you delete a choice, every item in your database with that choice in the field will now have a blank in that field. For instance, all items where your “Owner” field is set to “Sheila” and you delete “Sheila,” the “Owner” field will be blank.

To delete a choice from a list field:





1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the name of the list field in which you want to change the order of the choices.
4. Tap the “delete” button  to the left of the choice.
5. When you’re done, tap “save.”

Removing a field from your database

You can remove a user-defined text field or a list field from your database. **NOTE:** when you remove a field, it will disappear from every item in your database along with whatever the contents of each field was for each item.

To remove a field from your database:



1. Tap “data” on the Discover Grok home screen.
2. Tap the Fields button  in the upper right.
3. Tap the delete button  next to the field you want to delete.
4. Tap the “delete” button on the right.
5. Tap “delete” in the message box to confirm.

Modifying the content of your database

You can modify the content of your database by adding a new item, modifying an existing item, or deleting an existing item.

Adding items to your database

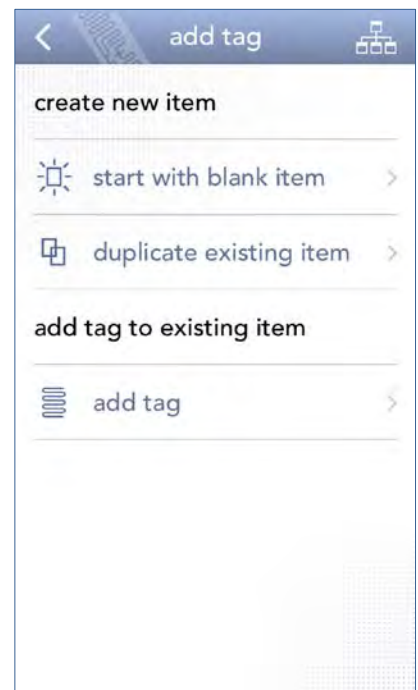
Once you have set up the structure of your database with the fields you need, you can add items you want to track into that database. Once they're added, you can later view, edit, and delete items.

Note – If you know that you will want to add images to new items, you can take those images ahead of time and have them in your iOS device's image library.

Adding a new blank item to your database

To add a new item to your database, starting with blank fields:

1. Tap “add tag” on the Discover Grok home screen.
2. Tap “start with blank item.”
3. To add an image to that item, tap “add image.” Then take a photo of the item, or choose an image from your picture library.
4. Once you have taken a picture or chose a photo from your library, tap “use.” The new image will appear on your item's screen.
5. Tap each field's name for the item to enter information for a text field, or to select a choice for a list field.
6. To add an RFID tag to the item, tap “add tag” at the bottom of the screen. (You can also add a tag later.)
7. Place a single blank tag in front of the Grokker. Make sure no other tags are nearby. If the Grokker detects more than one tag, information on the screen will warn you to remove some until it detects only one tag.
8. Tap “use this tag.”
9. The tag will now appear in that item's information in your database.
10. To tag another item, tap “tag another.” If you're done, tap “done.”



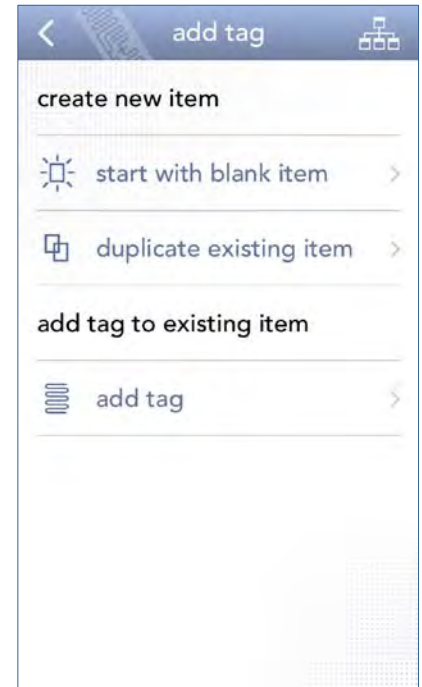
Adding a new item to your database by duplicating another item

You might already have an item with information in your database that largely corresponds to the information for a new item you want to add. For instance, you might have more than one Air Filter you want to track, but all of those air filters are exactly alike except for the unique RFID tag you'll use to track each one separately. Once you have entered the necessary information for the first Air Filter, you can save time by using that first entry to create each next one.

To add a new item to your database by duplicating another item:



1. Tap “add tag” on the Discover Grok home screen.
2. Tap “duplicate existing item.”
3. Select the item from the list that you want to duplicate.
4. Tap any field for which you want to change the contents.
5. To add an RFID tag to the item, tap “add tag” at the bottom of the screen. (You can also add a tag later.)
6. Place a single blank tag in front of the Grokker. Make sure no other tags are nearby. If the Grokker detects more than one tag, information on the screen will warn you to remove some until it detects only one tag.
7. Tap “use this tag.”
8. The tag will now appear in that item’s information in your database.
9. To tag another item, tap “tag another.” If you are done, tap “done.”



Modifying existing items in your database

Once an item is in your database, you can add, remove, or change an item's information, including its RFID tag, its image, and any field's contents except the "last scanned" system field.

Selecting an item to modify

You can select an item to modify in one of several ways. You can select it without using your Grokker by looking through your database in Discover Grok, or you can select it by using your Grokker to find it in that database.

Selecting an item without using your Grokker

You can find an item to modify in your database in Discover Grok without using your Grokker:

1. Tap "data" on the Discover Grok home screen.
2. To view your entire database, tap "view" without changing any of the search values on this screen. To view a subset of your database you can change some of the values on this screen by tapping one or more field names and changing their values, then tapping "view."
3. Scroll through the list of items displayed to find the item you want to modify.
4. Tap that item in the list to display that item's information.



data

Selecting an item by using your Grokker

You can find an item in your database that has an RFID tags associated with it by using Discover Grok connected to your Grokker to scan that item's tag:

1. Place the tagged object within scanning distance of your Grokker.
2. Tap one of two buttons on the Discover Grok home screen:
 - a. Tap "identify," or
 - b. Tap "count" and, on the next screen, tap "count."
3. RFID tags within your Grokker's scan range will appear in the list. If the item you are looking for doesn't appear in the list, move your Grokker closer to that tag.
4. Tap the name of the item you want to modify.

Modifying an item's RFID Tag information

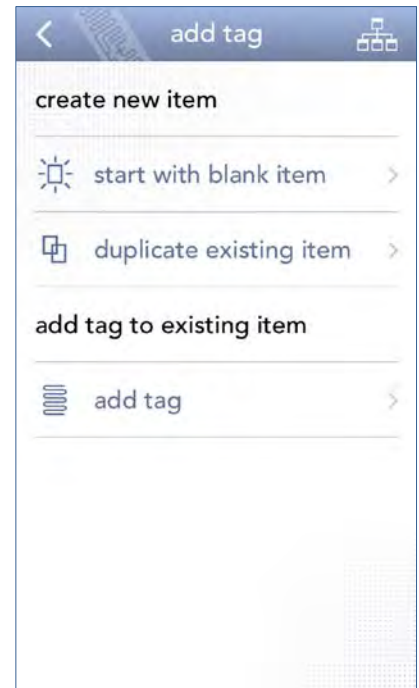
You can modify an item's the RFID tag information by adding a tag, removing a tag from an item, or assigning a new tag to a previously tagged item.

Adding an RFID tag to an existing item in your database

You can add a tag to an item you previously added to the database. To add a tag:



1. Tap “add tag” on the Discover Grok home screen.
2. On the next screen, tap “add tag.” Note: this item will only appear on this screen if you have one or more items in your database that do not have an associated RFID tag.
3. Select the item you want to use from the list.
4. Place a single blank tag in front of the Grokker. Make sure no other tags are nearby. If the Grokker detects more than one tag, information on the screen will warn you to remove some until it detects only one tag.
5. Tap “use this tag.”
6. The tag will now appear in that item's information in your database.
7. Tap “ok.”

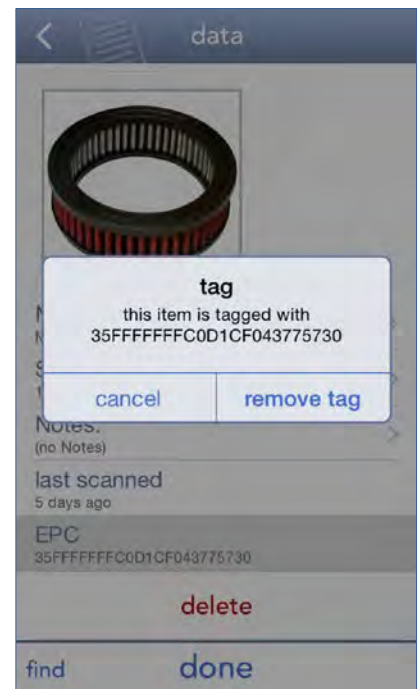


Removing an RFID tag from an item

You can remove the tag that's associated with an item in your database. To remove a tag:



1. Tap “data” on the Discover Grok home screen.
2. Tap “view” to see all the items in your database.
3. Select the item for which you want to change the tag.
4. Tap the “EPC” field.
5. Tap “remove tag.”
6. Tap “save.” That tag is now no longer associated with that item.

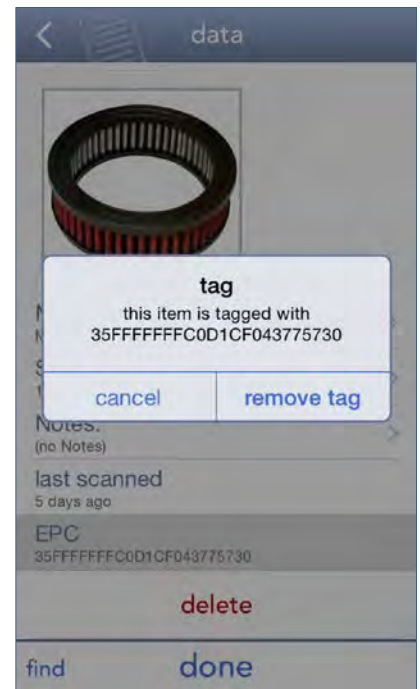


Assigning a new RFID tag to a previously tagged item

You can remove the tag that's associated with an item in your database, and add a new tag:



1. Tap "data" on the Discover Grok home screen.
2. Tap "view" to see all the items in your database.
3. Select the item for which you want to change the tag.
4. Tap the "EPC" field.
5. Tap "remove tag." That tag is now no longer associated with that item.
6. Tap the "EPC" field again.
7. Place a single blank tag in front of the Grokker. Make sure no other tags are nearby. If the Grokker detects more than one tag, information on the screen will warn you to remove some until it detects only one tag.
8. Tap "use this tag."
9. The tag will now appear in that item's information in your database.
10. Tap "ok."
11. Tap "done."



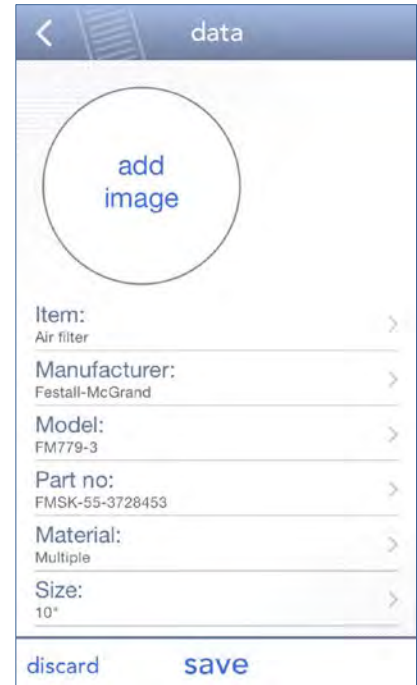
Modifying an item's image

You can add, change, or remove an item's image.

Adding an item's image

To add an image to an item that doesn't already have an image associated with it:

1. [Select the item](#) you want to modify.
2. Tap "add image."
3. Tap "take" to take a new image of the item, or tap "choose" to select an image from your iOS device's photo library.
4. Tap "use" to select that image, or "re-take" to take a new image or select a new image.
5. Your image will appear on that item's screen.



Changing an item's image

To change an item's image:

1. [Select the item](#) you want to modify.
2. Tap the item's image.
3. Tap "take" to take a new image of the item, or tap "choose" to select an image from your iOS device's photo library.
4. Tap "use" to select that image, or "re-take" to take a new image or select a new image.
5. Your image will appear on that item's screen.

Removing an item's image

To remove an item's image:

1. [Select the item](#) you want to modify.
2. Tap the item's image.
3. Tap "clear" to remove the image.
4. The item will no longer have an image associated with it.



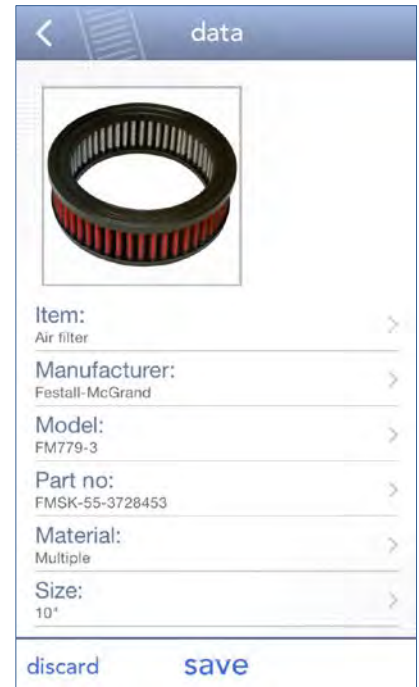
Modifying the content of a user-defined field

You can add, change, or delete the content of any item's user-defined fields.

Adding or changing the content of a user-defined field

To add or change the content of an item's user-defined field:

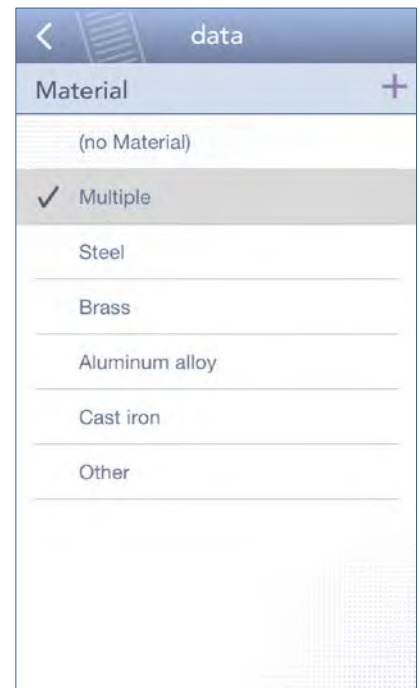
1. [Select the item](#) you want to modify.
2. Tap the field whose contents you want to add or change.
3. In a text field, edit the information using your keyboard. When done, tap "done."
4. In a list field, tap the selection you want in the list.
5. Tap "save."



Removing the content of a list field

If a list field is not flagged as "required," you can remove the contents of that field. NOTE: if a list field is flagged as "required" you cannot remove the contents of that field, you can only change the list choice to another choice. To remove the content of a list field:

1. [Select the item](#) you want to modify.
2. Tap the list field whose contents you want to delete.
3. Tap the top choice in the list, which will show the list name with the word "no." (For instance, a "Material" list will show the first choice as "(no Material).") Note: this option will not appear if a list field is flagged as "required."
4. Tap "save."



Deleting an item from your database

You can delete an item permanently from your U Grok It Cloud database.

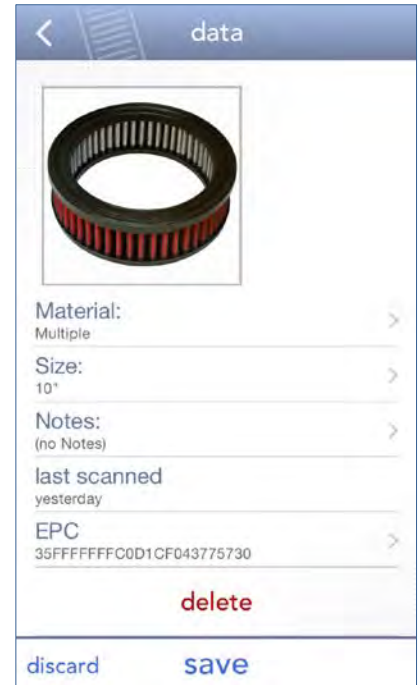


WARNING!

When you delete an item, all its associated data, including associated RFID tag information, will be permanently deleted from your U Grok It Cloud database as well as from the local database on any iOS device that is logged in to that same U Grok It Cloud database.

To permanently delete an item from your database:

1. [Select the item](#) you want to delete.
2. Slide the screen up until you see the red “delete” text.
3. Tap “delete.”
4. Confirm that you want to delete the item.




Modifying multiple items at the same time

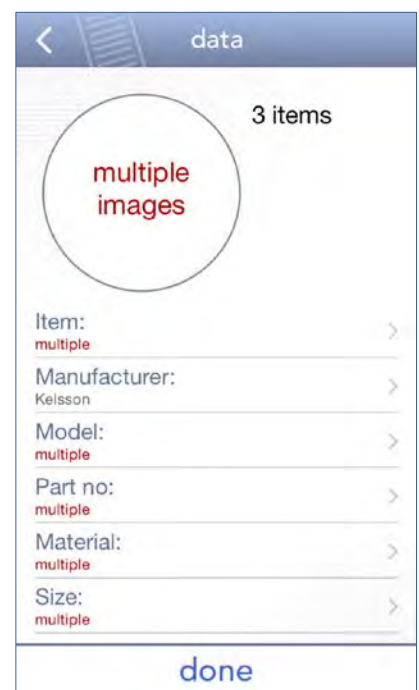
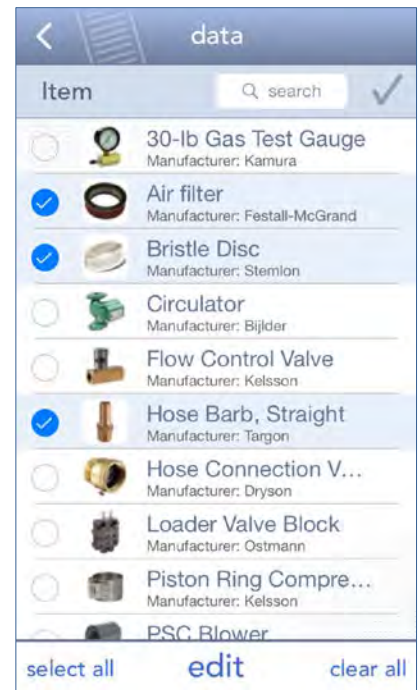
You can modify the fields of multiple items in your database at the same time, so all the items have the same content in that field. For instance, you can modify the Image field of multiple items so they all use the same image, or you can modify an “Owner” field so the items are all listed as having the same owner.

Note: you cannot modify multiple items to use the same RFID tag number. Each tag is unique, so you can only associate a tag with one item in your database.

Modifying multiple items without using the Grokker

You can find multiple items to modify in your database in Discover Grok without using your Grokker:

1. Tap “data” on the Discover Grok home screen.
2. To view your entire database, tap “view” without changing any of the search values on this screen. To view a subset of your database you can change some of the values on this screen by tapping one or more field names and changing their values, then tapping “view.”
3. Tap the Select button 
4. Scroll through the list of items displayed to find the item you want to modify.
5. Select the items you want to modify by tapping the circle to the left of each item.
6. Tap “edit” at the bottom of the screen.
7. Tap the field you want to edit. Fields in which the items selected have different contents will appear with the word “multiple.”
8. Modify the field’s contents. If this is a List field and the selected items have different choices in this field, the list contents will appear without any choice selected. If this is a Text field and the selected items have different content in this field, the field contents will appear blank; when you modify this text field any previous contents will be deleted.

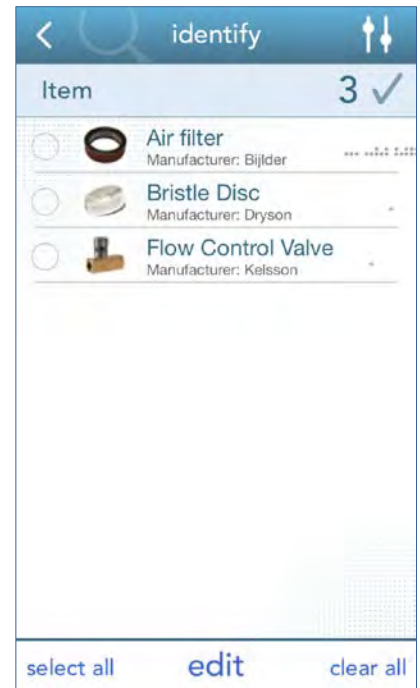


Modifying multiple items by using your Grokker

You can find multiple items in your database that have RFID tags associated with them by using Discover Grok connected to your Grokker to scan those items' tags. To use Discover Grok to identify tagged items in your database:



1. Place the tagged objects within scanning distance of your Grokker.
2. Tap "identify" on the Discover Grok home screen.
3. RFID tags within your Grokker's scan range will appear in the list. If the items you are looking for do not appear in the list, move your Grokker closer to those tags.
4. Tap "stop" once you are done scanning the items.
5. Tap the Select button
6. Scroll through the list of items displayed to find the item you want to modify.
7. Select the items you want to modify by tapping the circle to the left of each item.
8. Tap "edit" at the bottom of the screen.
9. Tap the field you want to edit.
10. Modify the field's contents. If this is a List field and the selected items have different choices in this field, the list contents will appear without any choice selected. If this is a Text field and the selected items have different content in this field, the field contents will appear blank; when you modify this text field any previous contents will be deleted.



Advanced: working with your database from a computer



For large databases it can be easier and faster to work with your database using spreadsheet or database software on a computer. You can create and manage the database on your computer, then export it to the U Grok It Cloud and view and use that database using Discover Grok on your iOS device. You can also then import that database from the U Grok It Cloud back into your computer software to view or modify the contents. You cannot edit your U Grok It Cloud database directly from a computer, only import/export it to edit in third-party software.

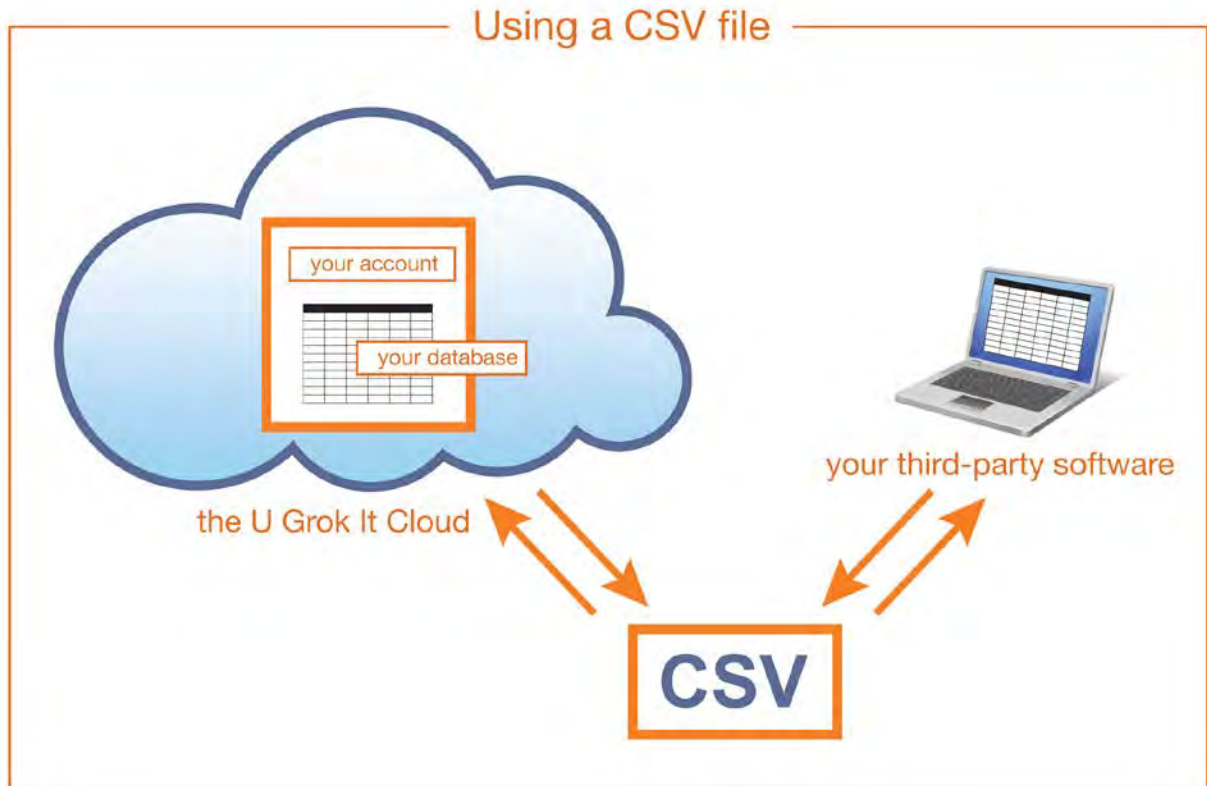
Using third-party software such as Microsoft® Excel® or other spreadsheets or databases is fairly complex, however, since it requires you to export your data to a CSV (“Comma-Separated Value”) file for importing into the U Grok It Cloud, and it requires you to use specific terms and syntax in your original spreadsheet or database.



NOTE: This feature of Discover Grok is designed for those with experience importing and exporting CSV files. There are specific requirements including specific database design, rules, and language. If you are not familiar with CSV files or using specific syntax in spreadsheets and databases, it is easier to use Discover Grok for all your database management rather than third-party software.



Structure of a CSV file that is compatible with the U Grok It Cloud database



This section assumes you have read [Understanding the Discover Grok Database](#).

Your CSV file will contain the field definitions and all the content for your U Grok It Cloud database.

You can use a third-party spreadsheet or database to generate a U Grok It compatible CSV file. We will describe the layout in spreadsheet terms with numbered rows and lettered columns (the database equivalent of records and fields accordingly).

The first row (row 1) defines each field; subsequent rows contain content for the fields. Note, you must have at least one field defined in the first row and first column (cell 1A).

Field attributes

Each field has the following **field attributes**:

- name**,
- type**,
- default**,
- required**,
- and **choices** (only used when type=list)

followed by an equals sign ("=") and a value.

Multiple attributes for the same field are separated by semicolons (";").

```
attribute1=value1;attribute2=value2;...
```

To keep things simple, user-defined fields are expected to be **type=Text**, **required=false**, and with no **default** value. Thus, the only thing needed to define a Text field with these attributes is the **name**. So if your database fields are text fields with no default value and are not required, then you only enter the name of that field in row 1 like this (does not need name= before it).

C	
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If any of your fields are List and or have defaults or are required, then you specify that in the appropriate column in row 1 like this:

D	
name=Color;type=List;choices=blue gold red white	

Note that there are no spaces between the attributes. You may have spaces in values. If you need punctuation in a value, you should put double-quotes around it. For example:

E	
name="Street Name, if available"	

List fields

To have a field with a predefined list of choices, define the field with **type=List**, and provide a **choices** attribute. The value for a **choices** attribute contains the list of choices separated by pipe ("|") characters:

```
choices=choice1|choice2|...|choiceN
```

For example, for a field called Color that has just two options: blue and gold, the field definition would look like:

```
name=Color;type=List;choices=blue|gold
```

A more complex example is a list that has three options: blue, gold and "a gentle, pale green" where the default is blue (the default value for a List must be one of the list choices) and the field is required. That field definition would look like this:

```
name=Color;type=List;choices=blue|gold|"a gentle, pale green";default=blue;required=true
```

System fields

There are three system fields: **EPC**, **Last Scanned**, and **Image ID**. These names are reserved and cannot be used for other fields in your database. To use them, put only EPC, Last Scanned or Image ID in row 1 (not name=EPC) and no other attributes. Your CSV file does not need to contain any of these three fields; they will be added to the U Grok It Cloud database automatically after the file is imported. However, if you do not include them, then the content for these fields will be blank.

EPC

If you already know the EPC tag numbers of your items, then you will want to include the EPC field and the values in your CSV file so that they become part of the U Grok It Cloud database and the items can be scanned with a Grokker and the Discover Grok app. The format for the EPC is the hexadecimal representation of the 96-bit (or greater) EPC number. For a 96-bit EPC, this will be a 24 character hex number. Since many spreadsheets and databases do not show leading zeros, the U Grok It Cloud database will prepend the appropriate number of zeros to any EPC value that has less than 24 digits.

If you do not include the EPC values, your Grokker will not know what tags are associated with what data. If your CSV file does not have EPC values, then after you import the CSV file to your U Grok It database, you will need to modify each item to add an RFID tag (see Adding an RFID tag to an existing item in your database above). Optionally, the EPC can have an underscore at the start. When U Grok It exports a CSV file, it puts an underscore at the start of the CSV. This allows better integration with certain popular spreadsheets that remove leading zeros and convert large numbers to scientific notation.

Last Scanned

Last Scanned is a date and time stamp for the last time an item was scanned. If left blank, the field will be updated the next time the item is scanned with a Grokker and Discover Grok.

The format for Last Scanned is **yyyy-mm-dd hh:mm:ss** or **mm/dd/yy hh:mm** like this:

2014-12-05 22:30:10
12/05/14 22:30

All times are in UTC (universal coordinated time, also known as Greenwich Mean Time).

Image ID

Images are stored separately from the U Grok It Cloud database, which stores the Image ID, a reference to the image file in the U Grok It Cloud.

You cannot import images to the U Grok It Cloud through a CSV file. Images can only be put in the U Grok It Cloud from Discover Grok. When an image is associated with a tagged item, the Image ID pointer will be put in the Image ID field in the U Grok It database.

If you export the U Grok It Cloud database to CSV, the Image ID field and contents will be exported and can be imported back to the U Grok It Cloud database so the images remain associated with the items.

CSV example

In a database of alphabet flash cards where the EPCs are the numbers 1 through 26, the database has the following fields:

Letter: type=text, default=blank, required=false

Example: type=text, default=blank, required=false

Category: type=list, default=consonant, required=true, choices= vowel or consonant

The spreadsheet would look like this:

A	B	C	D
Letter	Example	name=Category;type=list;default=consonant;required=true;choices=vowel consonant	EPC
A	A-Apple	vowel	1
B	B-Bear	consonant	2
C	C-Cat	consonant	3
Z	Z-Zebra	consonant	26

The CSV that your third-party software will generate will look like this:

```
Letter,Example,name=Category;type=list;default=consonant;required=true;choices=vowel|consonant,EPC
A,A-Apple,vowel,1
B,B-Bear,consonant,2
C,C-Cat,consonant,3
...
Z,Z-Zebra,consonant,4
```



How to import data into your U Grok It Cloud database

You can create a U Grok It Cloud database in two ways: from the Discover Grok app, and through the U Grok It Cloud website. This section details how to import data from a third-party application or data source into your U Grok It Cloud database.

What needs to be in a U Grok It Cloud database?

A U Grok It Cloud database is defined by its *fields* that contain content. By using third-party software to create a file in the correct CSV format, you can fully define and create a compatible U Grok It Cloud database that you can then import to the U Grok It Cloud to become your database.



WARNING!

When you import a CSV file through the U Grok It website, you create an entirely new database and overwrite your old database. The Import first **deletes your previous database and all its data**, then uses the CSV file to define the fields and supply all the data for your new database.

This means that **if you want to keep any of your data in your U Grok It Cloud database before a CSV Import, [you must export the data first](#) and keep that file safe**

What happens to data on devices?

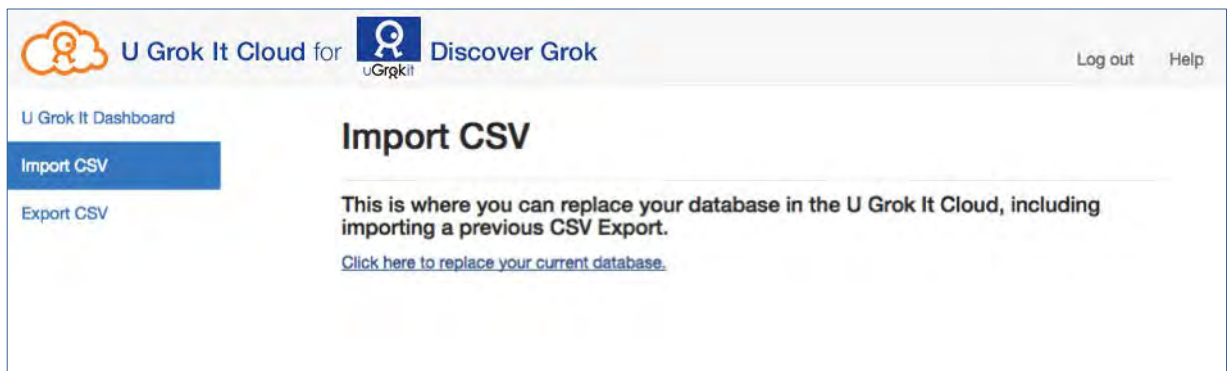
The U Grok It Cloud database is the central, authoritative copy of the database. When a device running Discover Grok connects to the U Grok It Cloud, the central copy is updated with any new information associated with the current database, and any changes made to the central database is copied out to the device. The changes include new items, changed field definitions, and even whole database deletion.

This means that when a new database is created in the U Grok It Cloud, **all previous copies of the old database are deleted from devices** when they connect to the U Grok It Cloud. Thus, any new items or item updates to the old database will be lost if you replace the U Grok It Cloud database before all devices have synced.

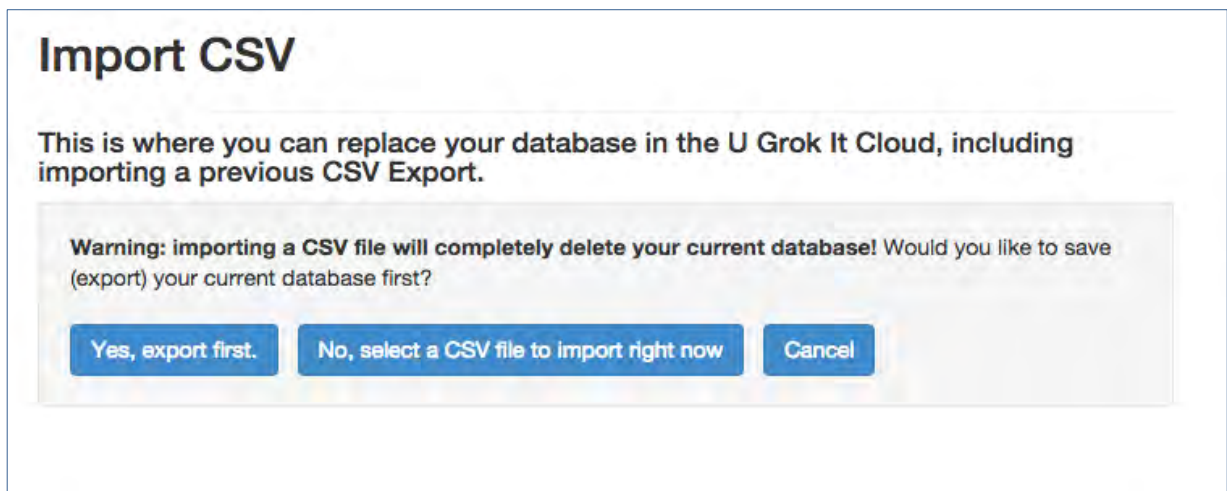
How to import a CSV file

Given a CSV file formatted as described in the previous chapter, importing its data into the U Grok It Cloud is done through the Discover Grok website.

After logging in to the website, click on the “Import CSV” link to the left of the page to bring up the Import CSV page:



Click on the “Click here...” link, which will show a warning.



If you click on the “Yes, export first” button, it will navigate to the Export CSV page. Otherwise, you can Cancel, or select a CSV file from your local file system. Once you have selected a file, it will give you one last chance to upload the file. If you choose to upload, it will either tell you that the file uploaded successfully, or it’ll give you some details about what went wrong.

CSV import problems

The CSV Import system expects files that are defined exactly as described [in the previous chapter](#). If it detects any problems, your previous database will remain intact, exactly as it was before the import attempt.

When things go wrong, you'll see a message that attempts to explain where the problem is in the file, and what was expected vs. what was found. Here are the most common types of errors:

EmptyFieldDefinition

Problem: each cell in the first row must contain a field definition. In CSV, an empty cell is indicated by having two or more commas in a row.

Solution: remove the empty field definition (i.e., make sure there are no consecutive commas).

NoName

Problem: every user-defined field must have a name, and at least one field in row 1 was missing a name.

Example of a missing name field: "type=String;default=hello;required=true"

Solution: add a "name" attribute to the field definition.

Fixed version of this example:

```
"name=Greeting;type=String;default=hello;required=true"
```

InvalidFieldType

Problem: a field definition in row 1 has a type attribute set to something other than Text or List.

Example of a bad type definition: "name=Address;type=Text"

Solution: Use either Text or List as the type. A fixed version of the above example: "name=Address;type=Text"

MissingListValues

Problem: a user-defined List field in row 1 is missing its choices attribute.

Example of a bad type definition:

```
"name=Salutation;type=List;default=Ms;required=true"
```

Solution: provide a choices attribute too.

Fixed version of this example:

```
"name=Salutation;type=List;choices=Ms | Mr | Dr;default=Ms;required=true"
```

DuplicateListValues

Problem: a user-defined List field in row 1 has repeated entries in the choices attribute.

Example of a bad type definition"

```
"name=Salutation;type=List;choices=Ms | Mr | Ms;default=Ms"
```

Solution: Don't use the same entry more than once in the choices attribute.

Fixed version of this example:

```
"name=Salutation;type=List;choices=Ms | Mr | Herr  
Doktor;default=Ms"
```

InvalidNumberOfFields

Problem: the importing system encountered an item row that had too many or too few fields. Row 1 defines the number and type of fields that the following rows must match.

Example of a CSV with two fields defined, but missing a field in the second item row, and providing one too many in the fourth item row:

```
Last name,name=Salutation;type=List;choices=Ms|Mr  
Smith,Mr  
Jones  
Morgan,Ms  
Rodgers, Aaron, Mr
```

Solution: provide the same number of fields in each item row as in the field definition row.

Fixed version of this example:

```
Last name,name=Salutation;type=List;choices=Ms|Mr  
Smith,Mr  
Jones,Ms  
Morgan,Ms  
Rodgers,Mr
```

InvalidDateTime

Problem: the last scanned system field is provided when the file is exported, and can be provided in imported CSV files. It expects the date and time to be in one of two specific formats: **yyyy-mm-dd hh:mm:ss** or **mm/dd/yy hh:mm**

Example of a date in the wrong format: 12/05/2014 22:30

Solution: write the date in one of two correct formats.

Fixed versions of this example:

```
12/05/14 22:30  
2014-12-05 22:30:10
```

InvalidListValue

Problem: a default value or an item field choice is not among the list of choices in the field definition.

Example of a missing choice:

```
"name=Color;type=List;choices=gold|blue;default=red".  
Blue or gold are legal choices here; red is not an option.
```

Solution: add "red" to the available choices

Fixed version of this example:

```
"name=Color;type=List;choices=gold|blue|red;default=red".
```

FieldTooLong

Problem: the maximum number of characters in a field value is 10,000. Check to make sure no field values have over that many characters.

Solution: make sure there are no more than 10,000 characters in that field value. Edit that value as necessary.

InvalidEpcValue

Problem: the EPC system field accepts only hexadecimal digits: 0-9 and a-f.

Optionally, values in this field can start with an underscore character to indicate to spreadsheets that the number should be left with prepended 0's.

Example of a bad EPC number:

121211212121212BBB888123**G** (the "G" at the end is not a hexadecimal digit)

Solution: replace the incorrect hexadecimal digit with a correct one.

Fixed version of this example:

121211212121212BBB888123**F**

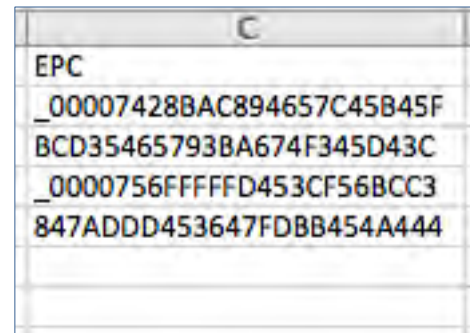
How to add tags to your U Grok It Cloud database

There are two ways you can add UHF RFID tags to your U Grok It Cloud database: by entering the tags' EPC numbers directly to the original spreadsheet or database that you imported into the U Grok It Cloud, or by adding the tag's EPC numbers using Discover Grok on your iOS device.

Enter tag numbers directly in your original spreadsheet or database

You can enter your tags' EPC numbers directly into your original spreadsheet or database, then import that in the U Grok It Cloud. You might choose to do this if you already have a list of those EPC numbers, or if you have had a set of UHF RFID tags printed with a specific number range. To enter EPC numbers in your original spreadsheet or database:

1. Create a column in your spreadsheet with the text "EPC" in the cell in Row 1. (If you have previously imported your spreadsheet or database into the U Grok It Cloud, and then exported it again, you will see that Discover Grok automatically created that column for you.)
2. Enter the EPC numbers. Valid EPC numbers must contain only hexadecimal digits: 0-9 and a-f. Any other letters or characters [will lead to an "InvalidEpcValue" error](#) when you try to import the CSV file into the U Grok It Cloud. If your EPC number starts with the number 0 you can add an underscore character ("_") to the front of the number to make sure your spreadsheet or database doesn't remove those 0's when creating the CSV file, like this:
_0000034a67f84b.
3. Export the data to CSV.
4. Import the CSV file to the U Grok It Cloud by [following these instructions](#).
5. The EPC tag numbers will now be a part of the U Grok It Cloud database.
6. Log into your account in Discover Grok on your iOS device. You can now use the Grokker with your iOS device to identify, locate, and count those tags.



EPC
_00007428BAC894657C45B45F
BCD35465793BA674F345D43C
_0000756FFFFFD453CF56BCC3
847ADDD453647FDBB454A444

Add tag numbers by using Discover Grok and your Grokker

After you import your CSV file into the U Grok It Cloud, you can also add tags to each of your items in your database by using Discover Grok on your iOS device. To do so:

1. [Log in to your account](#) in Discover Grok.
2. [Follow these instructions](#) on how to add tags to your database.

How to export data from your U Grok It Cloud database

You can export your data from your U Grok It Cloud database to a CSV file, which you can then open in a spreadsheet or database on your computer to view, edit, or manage the information.

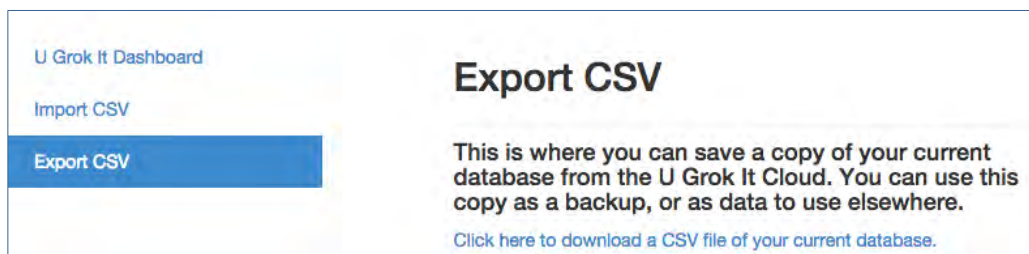


WARNING!

If you make any changes to your CSV file and then re-import that file through the U Grok It website, you will create a new database and overwrite the old database. The Import first **deletes your previous database and all its data**, then uses the CSV file you import to define the fields and supply all the data for the new database.

To export your data from your U Grok It Cloud database:

1. Log in to your account on our website at login.ugrokit.com:



2. Click the “Export CSV” button.
3. Click “Click here to download a CSV file of your current database.”
4. Open the downloaded file in your spreadsheet or database app.

How to re-import your data after export

You can re-import your data after first exporting it from the U Grok It Cloud database. This will allow you to use your computer software to make fast edits to many items’ EPC numbers, for instance, or to make larger changes to the database.

You should be careful to follow these guidelines:

- **Image information.** Image information is stored in your database using identifiers, so you should be careful not to change the contents of any of those fields. If you do, the images you used may not display in Discover Grok.
- **Long numbers such as serial numbers or UPC codes.** When your computer software imports the CSV file, it may interpret those numbers as general numbers and change their format (such as by displaying them in scientific notation). You should verify that all fields that use numbers display correctly in your software before exporting them back out to a CSV file that you intend to import into the U Grok It Cloud database. In the case where a number is displayed using scientific notation, for instance, you might need to change the format of that number from “General” to “Number.” Whatever you see in your computer software is what will be imported into the U Grok It Cloud database as text, so make sure what is see is exactly how you want it in the U Grok It Cloud database.

- **EPC:** Discover Grok adds an underscore to the beginning of each EPC number to make sure that your computer software doesn't alter or reinterpret that number. You don't need to change that underscore, since Discover Grok will correctly read everything after that character as the EPC number.

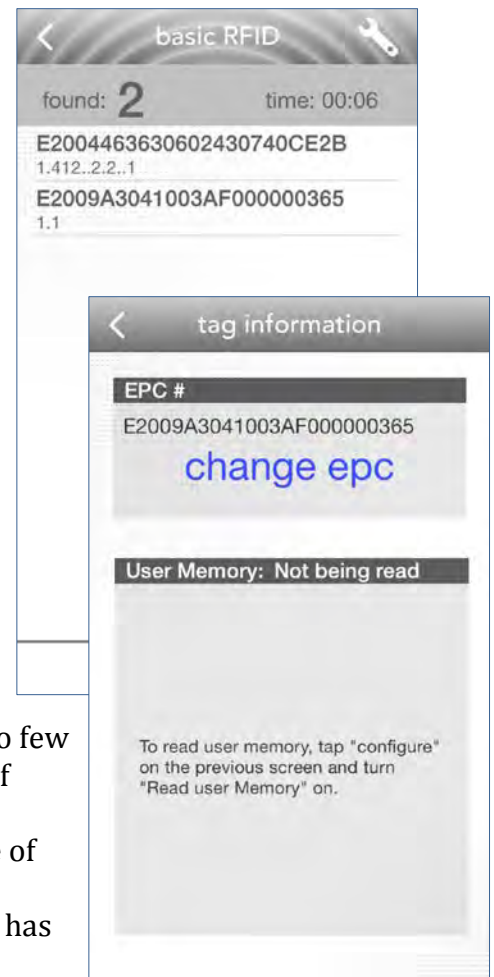
Changing a tag's RFID number

Each RFID tag uses a 96-bit number, sometimes also referred to as its EPC number. You can change the EPC number of one or more tags to satisfy different requirements:

- **Serial sequence:** you want some or all of your tags to be a part of a serial sequence of numbers.
- **Organizational codes:** you want part or all of your tags' RFID numbers to reflect a particular organizational or product code.
- **Number differentiation:** the tags you receive from the tag manufacturer all arrive with the exact same number, and you want to assign them all unique numbers.

You can change the RFID number of each of your tags within Discover Grok (this is also referred to as "commissioning a tag"). To change each individual tag's RFID number:

1. Place a single tag in front of the Grokker. Make sure no other tags are within range of the Grokker.
2. Tap "basic RFID" on the Discover Grok home screen. The Grokker will start scanning.
3. Scan the tag. (To save battery life on the Grokker you can tap the "stop" button once your tag appears in the inventory list.)
4. Tap the tag number when it appears in the list. If you don't know the EPC number that you want to change, isolate the tag so that it is the only tag that the Grokker can scan. You can do this by removing other tags from the area or by moving yourself and the selected tag to an area free of other RFID tags.
5. Tap "change EPC" ("EPC" is a term sometimes used to refer to the tag number). The "change EPC" message box will appear.
6. Enter the tag number you'd like to use. It must be a valid tag number using the digits 0-9 and A-F. The "change" button on this message box will become usable when the code you enter uses valid digits and does not exceed the valid length of a tag number, which is normally 24 digits. If you enter too few digits, the Grokker will add the necessary number of zeros to the beginning of the tag number.
7. Tap "change". Make sure the tag is still within range of the Grokker so it can change the number on the tag.
8. Tap "ok" on the confirmation message. The tag now has the new tag number.



Scanning tagged objects

Once you have created a database of items with associated RFID tags, you can use your Grokker to identify, locate, and count those items.

For details on how to create a database, please see the sections [Working with your database from Discover Grok](#), or [Working with your database from a computer](#).

Note: at least one of the items in your database must have an RFID tag associated with it in order to use your Grokker to scan items.

Any time that the Grokker scans an item that is in your database, the database is updated with the date and time that item is scanned. The date and time are kept in the “Last Scanned” system field.

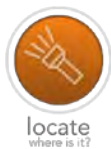
Main Discover Grok 2.0 Features

Discover Grok has three main features: Identify, Locate and Count



Identify

Use Identify to see what you know about the RFID tags and tagged items that are around you. If a tag is in your database, then the database information associated with that tag will be displayed. If a tag is not in your database, then the tag's EPC will be displayed. Identify beeps every time it finds a tag, even if it has already found that tag. Identify does not aggregate any item information nor count any items. Use it simply to identify what tags and items are around you.



Locate

Use locate to help you find a specific RFID tagged item that is in your database. Locate will beep each time it finds the item you select, beeping faster when the Grokker scans the item more often, slower when the Grokker scans the item less often, or stopping to beep when the Grokker no longer sees the item. Following the beeping can lead you to the item. Use locate when you want to find a tagged item that is in your database.



Count

Use Count to take inventory of the RFID tagged items in your database. Count keeps a running count of the items the Grokker has scanned and can show you what items from your database have not been scanned (are missing). Count can also filter what items the Grokker scans based on the fields in your database. Use Count to take inventory and to find subsets of the items in your database.



Using Identify

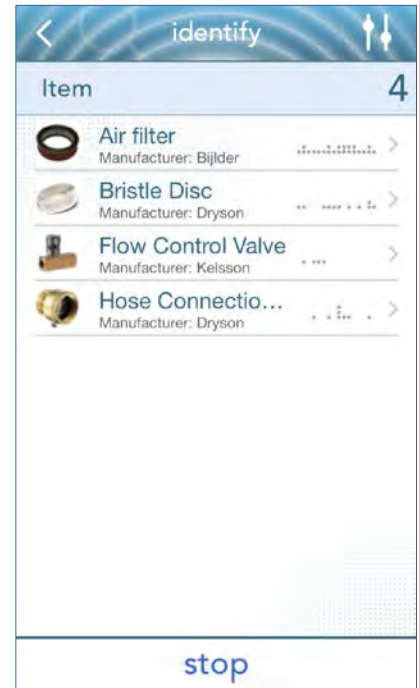
You can use the Identify feature to show you the RFID tagged items around you. Once you associate an RFID tag with an item in your database, Identify will show you that item's information by scanning its tag.

You can also scan RFID tags that are not associated with items in your database in order to view that tag's EPC number.

Identifying tagged objects that are in your database

To view the information associated with an RFID-tagged item in your database:

1. Have the item you want to identify within the Grokker's scan range. The scan range is 6-10' (2-3m), up to 25' (7m) in optimal conditions.
2. Tap "identify" on the Discover Grok home screen. Your Grokker will start scanning.
3. Tags within the Grokker's range will appear on the screen and the Grokker will beep each time it scans a tag. If more tags appear in the list than you like, move your Grokker closer to the tag you want to identify. Little dots next to each item show how often they respond to the Grokker; depending on which type of tag each item has, more frequent beeps and more dots usually mean the item is closer to the Grokker.
4. If more items appear on the screen than you'd like, move the item you want to identify away from other tagged items, or [lower the scanning distance of your Grokker](#).
5. Once you see the item in the list that you want, tap it to view or modify its information.



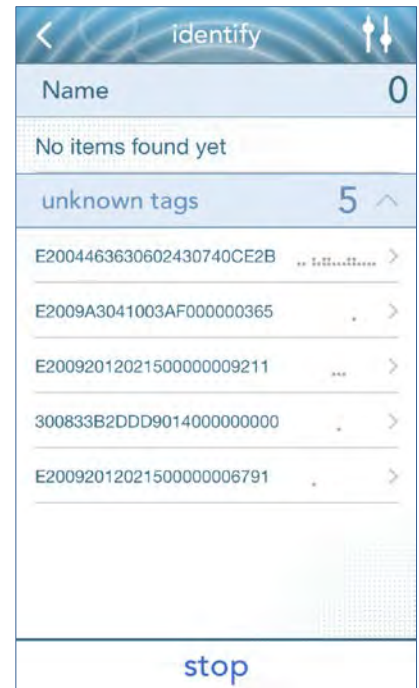
HINT

When looking at a list of items in your database, you can get a quick look at the contents of that item's other fields by swiping left or right on the screen.

Identifying EPC codes of tags that are not in your database

You can also view the EPC codes of RFID tags that are not in your database:

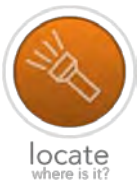
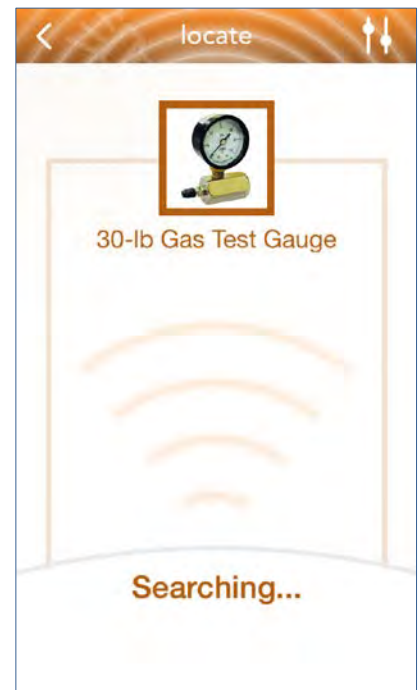
1. Have the tag for which you want to view the EPC code within the Grokker's scan range. The scan range is 6-10' (2-3m), up to 25' (7m) in optimal conditions.
2. Tap "identify" on the Discover Grok home screen. Your Grokker will start scanning.
3. RFID tags that are not associated with items in your database will appear in the "unknown tags" section of the screen, and the Grokker will beep each time it scans a tag. Tap "unknown tags" to view the EPC numbers of those tags.
4. If you want to change the EPC number of one of those tags, see the section [Commissioning a tag](#).



Using Locate

You can use your Grokker to search for and locate items that are in your database. To locate a tagged object:

1. Tap "locate" on the Discover Grok home screen.
2. Scroll through the list of database items to find the item you want to locate. To shorten the list, enter search text in the "search" box. (Note: the search box only searches for content in Text fields, not List fields.)
3. Tap the item you want to locate.
4. Your Grokker will start scanning for that item's tag.
5. When scanning for tags, move the Grokker gently while you walk around. Move your arm up and down and side to side and also turn your wrist some. This will maximize the Grokker's ability to find tags at all orientations.
6. When you find the item the Grokker will beep and the screen will change to let you know you found it. It will beep faster when you are pointing at the item and slower when you are pointing away, leading you to the item.





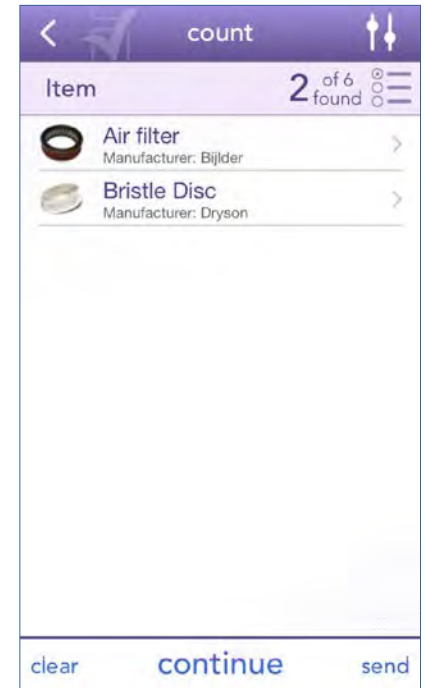
Using Count

You can take a count of all the objects that have entries in your database, or you can limit your count to a subset of items in your database.

Counting all items in your database

To take a count of all the items in your database:

1. Tap “count” on the Discover Grok home screen.
2. On the next screen, tap the “count” text at the bottom of the screen. Your Grokker will start scanning for all the items in your database.
3. When scanning, move the Grokker gently while you walk around. Move your arm up and down and side to side and also turn your wrist some. This will maximize the Grokker’s ability to find tags at all orientations.
4. The Grokker will beep once for each item found.
5. Tap “stop” when you are done. (You can continue the scan by tapping “continue.”)



Counting some items in your database

To count a subset of items in your database:

1. Tap “count” on the Discover Grok home screen.
2. Tap the name of a field to restrict the count to items with certain content in that field. For instance, you could tap an “Owner” field, then tap “Sheila,” to limit your count to items in your database owned by Sheila.
3. On the next screen, tap the “count” text at the bottom of the screen. Your Grokker will start scanning for the subset of items in your database.
4. When scanning, move the Grokker gently while you walk around. Move your arm up and down and side to side and also turn your wrist some. This will maximize the Grokker’s ability to find tags at all orientations.
5. The Grokker will beep once for each item found.
6. Tap “stop” when you are done. (You can continue the scan by tapping “continue.”)



HINT

When looking at a list of items in your database, you can get a quick look at the contents of that item’s other fields by swiping left or right on the screen.

Using and modifying count results

Viewing missing items instead of found items

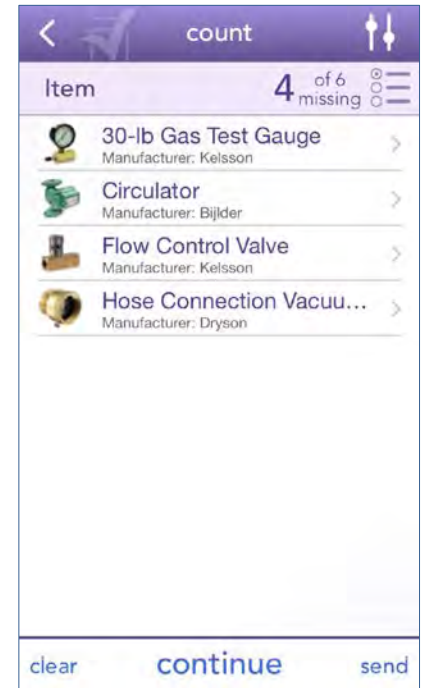
By default your count will display the items found during the scan. You can also display items that have not yet been found:

1. Follow the instructions above to count items in your database.
2. Tap the text to the right of “item” that shows how many items have been found.
3. That text will change to display how many items have not yet been counted, and the list will change to display those items.

Sending a count report

You can send a simple count report to the email address of the U Grok It Cloud account that you’re currently logged in to in Discover Grok. To send a report:

1. Follow the instructions above to count items in your database.
2. Tap “stop” to stop the scan.
3. Tap “send” to send the report to your email address.



Editing the data for an Item

There are a number of ways to get to a specific item so that you can edit that data:

- **Without using a Grokker.** Tap the Data button on the Discover Grok home screen , then tap view to see the items in your database. Tap an item to modify the Name filed, Image field and any user-added fields. EPC cannot be edited without using a Grokker
- **When using Grokker.** Tap any of the items shown in a list of scanned items to modify its fields.
- Note: you cannot edit the data for an item directly from Locate.

For specific instructions on how to edit the data for an item, please follow the instructions in [Modifying existing items in your database](#).



Using the *basic RFID* features

Basic RFID provides generic UHF Gen 2 reader functionality. It allows you to scan the tag number of any UHF Gen 2 tag, commission tags with a specific tag number, vary the Grokker configuration (dBm, session, etc.) and read and edit a tag's user memory (if it has any). Basic RFID does not use the U Grok It database and will not save any information about the tags that you scan with basic RFID.

Scanning Tags

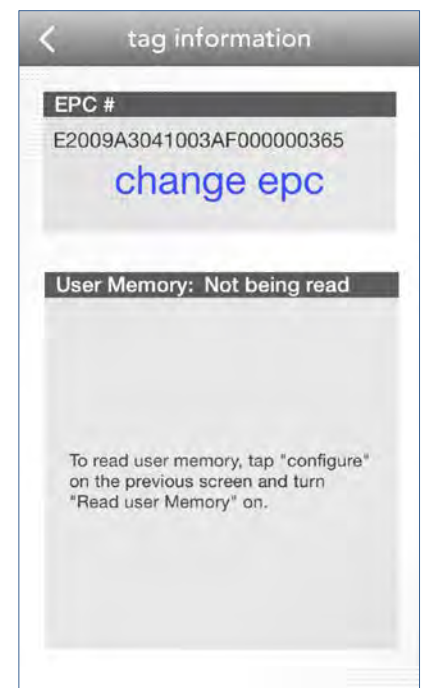
To scan all UHF Gen 2 tags that are present:

1. Tap "basic RFID" on the Discover Grok home screen. The Grokker will start scanning.
2. The screen will display the number of items found, the amount of time you're scanning, the tag numbers of tags as the Grokker finds them, and (in small numbers below the tag numbers) the number of responses the Grokker gets from each tag.
3. Tap "stop" to stop scanning.

Commissioning a tag

You can commission (write the EPC) a tag by scanning it and then assigning it a tag number:

1. Place a single tag in front of the Grokker. Make sure no other tags are within range of the Grokker.
2. Tap "basic RFID" on the Discover Grok home screen. The Grokker will start scanning.
3. Scan the tag. (To save battery life on the Grokker you can tap the "stop" button once your tag appears in the inventory list.)
4. Tap the tag number when it appears in the list. If you don't know the EPC number that you want to change, isolate the tag so that it is the only tag that the Grokker can scan. You can do this by removing other tags from the area or by moving yourself and the selected tag to an area free of other RFID tags.
5. Tap "change EPC" ("EPC" is a term sometimes used to refer to the tag number). The "change EPC" message box will appear.
6. Enter the tag number you'd like to use. It must be a valid tag number using the digits 0-9 and A-F. The "change" button on this message box will become usable when the code you enter uses valid digits and does not exceed the valid length of a tag number, which is normally 24 digits. If you enter too few digits, the Grokker will add the necessary number of zeros to the beginning of the tag number.




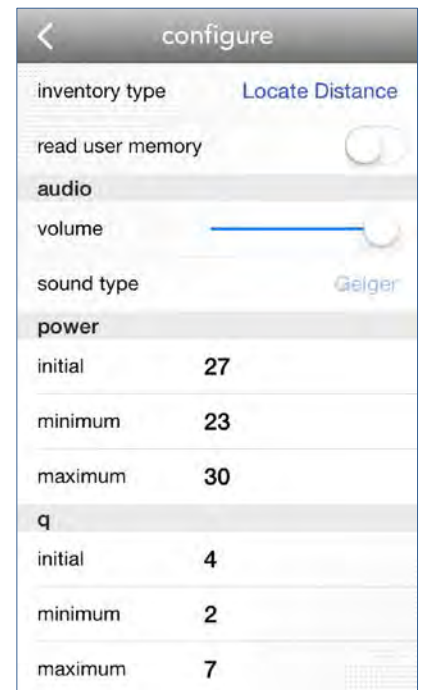
7. Tap “change”. Make sure the tag is still within range of the Grokker so it can change the number on the tag.
8. Tap “ok” on the confirmation message. The tag now has the new tag number.

Reading a tag’s user memory bank

The Grokker can read a tag’s user memory bank in addition to its tag number. Doing so will slow down tag scanning, since it is reading more information.

To read a tag’s user memory bank:

1. Tap “basic RFID” on the Discover Grok home screen.
2. Tap the Configure button .
3. Tap the “read user memory” toggle so it turns on.
4. Tap the back arrow to return to the “basic RFID” screen.
5. Tap “start.”
6. Start scanning. Tap the tag number of the tag when it appears in the list.
7. The “tag information” screen will appear, showing both the tag number and the contents of the User Memory Bank.

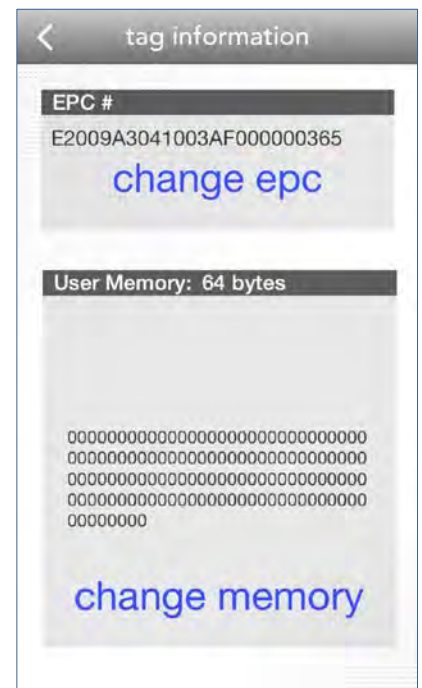


Changing a tag’s user memory bank

You can change the contents of a tag’s user memory bank.

To do this:

1. Follow the instructions above to read the tag’s user memory bank. If the tag has user memory available, its contents will appear in the “User Memory” section.
2. Tap “change memory.”
3. Modify the user memory information. It must be a valid number, of the correct length and using the digits 0-9 and A-F. The “change” button on this message box will become enabled when the code you enter is a valid number.
4. Tap “change”. Make sure the tag is still within range of the Grokker so it can change the user memory number on the tag.
5. Tap “ok” on the confirmation message. The tag now has the new user memory number.





Using the U Grok It flashcards database

U Grok It has a special account you can log in to that contains the data for a set of flashcards you can use to demo your Grokker. Please contact sales@ugrokit.com to purchase a set of the flashcards themselves (which have RFID tags that match the database).

Setting up the flashcards

Each flashcard has a stand attached to it. Before using them, please stand them up in any configuration you want. You can stand them all on one table, spread them out in multiple rooms, put them inside cardboard boxes – whatever best simulates how you or your clients are using RFID.

Logging in to the flashcards database account

To log in to the flashcards U Grok It Cloud account:

1. Tap “settings” on the Discover Grok home screen.
2. If you are already logged in to another U Grok It Cloud account, first log out by tapping “log out.”
3. Log in to the flashcard database account using these settings:
Email: abc@ugrokit.com
Password: abc
4. The flash card database will be loaded into Discover Grok and will be ready to use.
5. Feel free to use and modify this database. This is a special database account for demo purposes only, and any changes you make will not be updated to the U Grok It Cloud. **Note: any changes you make to the flashcard data in Discover Grok will be permanently deleted when you log out of this demo account.**

Logging out of the flashcards database account

1. Tap “settings” on the Discover Grok home screen.
2. Tap “end demo.”
3. **Note: any changes you make to the flashcard data in Discover Grok will be permanently deleted when you log out of this demo account.**

Working with the flashcards

To use your flashcards to identify, locate, and count items, see the respective sections earlier in this document.

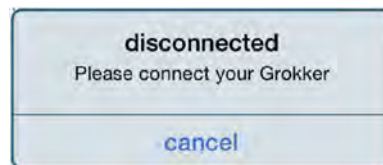
Troubleshooting

The screen is upside down

On the Apple iPhone 4 the audio port is at the top. Place the device upside-down on the Grokker to connect the audio cable. Don't worry: Discover Grok will flip when you start it, so everything will be right side up. If the screen doesn't flip: hold the device vertically for a second so it knows which way is up, and the screen will flip.

I want to explore Discover Grok without the Grokker attached

Discover Grok cannot scan or commission tags or interact with the Grokker unless the Grokker is attached; however, Discover Grok will run fine without the Grokker attached. You can see most of the screens and edit data without the Grokker attached. If you try to use a feature that requires the Grokker, Discover Grok will let you know with the alert:



The app keeps saying the Grokker is disconnected when I have plugged it into the audio port.

There can be three main issues that might keep your Grokker from connecting properly to your iOS device:

1. The Grokker battery has no/low power. If the Grokker has no power, then it cannot respond to the smart device to say it is plugged in. To check the battery power, see the section below.
2. The audio plug may not be completely inserted into your iOS device. While we are using an audio plug that is compatible with most iOS device cases, some cases can interfere with the audio plug. Try removing the case from your iOS device and inserting the Grokker audio plug to see if this is the problem.
3. Sometimes dirt or dust in your audio port can prevent a strong connection. Please clean your audio port.

How can I tell how much battery charge the Grokker has?

To check the battery power:

1. Connect your iOS device to the Grokker.
2. If your charger is connected to the Grokker, disconnect the charger.
3. Start Discover Grok. Your Grokker should connect. (Note: If you see a dialog box that says "Please connect your Grokker" when your Grokker is already connected, you may have no charge left. Please plug your Grokker in for at least an hour.)
4. Tap "settings."
5. Tap "Battery Level" to check the level.
6. Fully charging your Grokker takes 2-3 hours.
7. If after removing the case and charging the Grokker it still will not connect, please contact support at techsupport@ugrokit.com.

I am getting an error message when importing my CSV file into the U Grok It Cloud database

See [this section](#) for a list of error messages and their solutions

Charging your Grokker

You should fully charge your Grokker before use:

- Plug the charger's mini-USB plug into the USB port at the bottom of the handle of your Grokker.
- Then do one of the following:
 - Plug the charger into a 120V outlet, or
 - Disconnect the charger wire from the charger, and plug the charger's large USB plug into a USB port (such as one found on your laptop or desktop computer).
- Leave the Grokker plugged in for at least 2 hours.

Once the Grokker is fully charged, disconnect the charger. You are now ready to use the Grokker to scan RFID tags.

Customer support Please call (844) 847-6548 or visit us at www.ugrokit.com/support.

User manual You can find the user manual for your Grokker at www.ugrokit.com/manuals.

Proper Use To comply with FCC RF exposure compliance requirements this unit must be operated in the hand with a minimum separation of 22cm from the body and other persons. Other operating configurations should be avoided.

Modifications Any modifications made to this device that are not approved by U Grok It, Inc. may void the authority granted to the user by the FCC to operate this equipment.

FCC Class B Notice This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Industry Canada Statement This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE

ATTENTION RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉ PAR UN TYPE INCORRECT.

JETEZ LES PILES USAGÉES SELON LES INSTRUCTIONS

U Grok It Limited Warranty

U Grok It, Inc. warrants that: (a) new U Grok It products (“Products”) will be free from defects in material and workmanship for 1 year from the date of purchase, and (b) exchange units delivered to Customer to replace a defective Product returned to U Grok It by Customer will be free from defects in material and workmanship for the remainder of the defective and returned Product’s original warranty. U Grok It’s warranty shall not apply to any Products that are not operated in conformity with U Grok It’s published instructions, or to any Products which have been subject to misuse, abuse, negligence, or accident, or altered or repaired by anyone other than U Grok It or U Grok It’s authorized agent. In addition, this limited warranty does not cover any Product that has been damaged by causes external to the Product (including, without limitation, failure of or faulty electrical power) or that has been used in violation of U Grok It’s instructions for use.

In all cases, U Grok It has sole responsibility and discretion for determining the cause and nature of a Product defect, and U Grok It’s determination with regard thereto shall be final. Customer must notify U Grok It of any breach of warranty within the applicable warranty period and obtain an RMA number in accordance with U Grok It’s standard RMA process. Customer’s exclusive remedy and U Grok It’s sole obligation for any breach of warranty shall be, at U Grok It’s option, the repair of the Product or replacement of such Product with a Product of the same type, or the refund of the Purchase Price (defined below) for such Product. When notifying U Grok It of, or returning to U Grok It, any Products that fail to meet an applicable warranty, Customer shall comply with U Grok It’s then-current Return Material Authorization procedure (available upon request). U Grok It will pay freight on Products returned to Customer which are covered by the warranty Customer will pay freight on Products returned to U Grok It that are not covered by warranty. U Grok It owns, and Customer hereby assigns to U Grok It ownership of, any part, component, or item removed from a Product by U Grok It under these Terms for any reason.

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Certified to CSA Std C22.2 No. 60950-1