The Ins & Outs of
Asset tags for Equipment Management

CHEQROOM

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If you liked it then you shoulda put a tag on it

Any experienced equipment manager will confirm that the above statement is 100% true. Scannable tags and labels are cornerstones of how they work to keep equipment tracked, well maintained and even protected.

Combined with a digital asset management system like CHEQROOM, asset tags become indispensable. Those assets range from laptops & tablets, AV gear to drones. Just about anything, really. Asset tags are not picky, they work great for everyone and any type of gear.

> Asset tagging helps to ensure security, identification, and traceability of equipment within your organization. It's also crucial for maintenance management and keeping your assets in mint condition.

Asset tags exist in many shapes and forms. All of them make equipment management easier, but you'd like to pick the right ones for your AV company, school, hospital or tech business.

With this guide, we run you through what you'd like to know: why labelling your assets matters, which types of assets it can be used for, right down to the broad range of labels and applications that exist.

If you weren't nerding out on proper gear labeling before... **This guide will help you get there.**

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What is an asset tag exactly?

💡 Definition

Asset tags are usually labels with an adhesive backing that identify equipment using a unique serial number or a (bar)code. Common materials to use are laminated polyester or anodized aluminum. They typically include a company logo or name, a readable ID and some basic equipment details. The code on the asset tag holds more details, readable in combination with asset management software.

The above definition is already fairly accurate, although many, many sorts of asset tags and labels exist. They mostly differ in the way you apply them to your equipment or the material they are made of. Some are permanent or difficult to remove. Some are destructible by design, others are meant for harsh conditions.

What is asset tagging?

Asset tagging (or asset labeling) is giving a unique digital identity to each equipment asset by affixing a tag (or label) to it that bears a code and number specific to the asset.

This helps your operations, and allows you to locate the right equipment at the right time in the easiest way possible, especially if they're all indexed in an asset management system.

Asset tags go hand in hand with some form of a digital scanning system that transfers information off the label to a digital asset management system and/or end user.
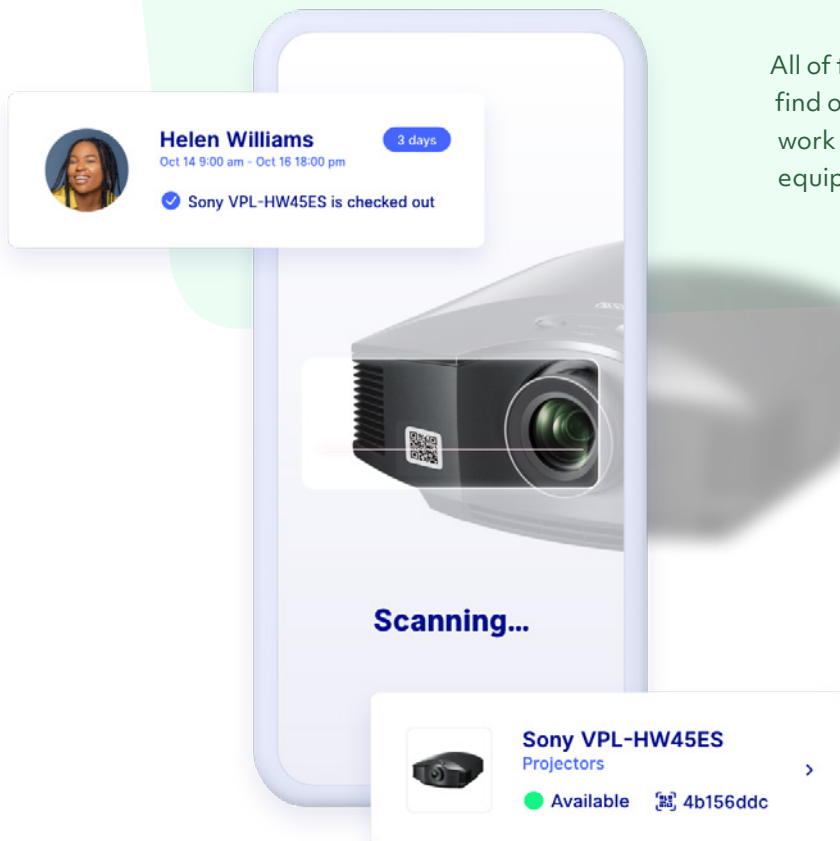
What are the benefits of asset tagging?

A simple barcode or QR code can make so much difference:

+ You can pull up and log information easily

+ You minimize manual time spend

+ You minimize the risk of error

+ You simplify gear tracking and monitoring

+ You protect your assets against theft and damages

With all the above working together, asset tags are also very cost-efficient

All of that in one label? Indeed. Read on to find out how these neat little contraptions work so well for equipment managers and equipment users.

Helen Williams   `3 days`
Oct 14 9:00 am - Oct 16 18:00 pm
✓ Sony VPL-HW45ES is checked out

Scanning...

Sony VPL-HW45ES
Projectors   >
● Available   ⌗ 4b156ddc

Why do asset tags work so well for equipment management?

Makes assets easier to identify, quickly and easily

Asset tags allow you to quickly identify the exact piece of equipment you're looking for. No more confusion talking about "the new Nikon d750, not the one we got this year but the one before that". From now on, you can safely refer to D2-002.

Proof of ownership for you and your organization

Asset tags are not only a smart way to identify assets within your organization; they can also be a way to show the equipment belongs to your organization. The easiest way to do this is by adding the logo or name of your organization on the asset tag.

Makes equipment audits easier

Identifying each piece of equipment with a tag makes it possible to run regular audits on your equipment. Every asset label holds an easy-to-follow audit trail based on the last seen location and/or last known user.

Save countless hours through digital scanning

Using asset tags with a barcode or QR code will enable you to scan the asset tags with a mobile app or a barcode scanner to access all the info you need in seconds.

Link with Asset Management System

Asset tags are a key enabler to any asset management system. Just scan the asset tag to book it, add comments or updates, maintenance requests or financial details. The system gives you all the latest up-to-date information at your fingertips. This stimulates accountability and provides a clear overview of your inventory.

☼ Share the responsibility

Equipment managers carry the responsibility of knowing where assets are at all times. Preferably, they also keep these assets in a good state. If the equipment you are in charge of is expensive, that may feel like a burden.

Asset tags make that responsibility shared. They tell you in whose possession each piece is, who used something last and where a piece of gear should be. Not surprisingly, companies with a smart asset tagging system quickly notice positive effects on damages and lost items.

What equipment should you tag?

Movable assets

The first items you should be tagging are those that move around a lot, are used by different colleagues within your organization or even loaned or rented out by freelancers. It's important to be able to track this kind of equipment and – with the help of an equipment management solution – keep tabs of who is using the equipment and when it's due back.

Fixed assets

Fixed assets are hard to lose. A television in a meeting room doesn't need its location tracked, it's just there attached to the wall. Tagging your immovable equipment holds other benefits. Most importantly, it helps you keep an overview of inspections, maintenance, warranty dates, etc. When was the last time your television software was updated? Exactly.

Expensive or prone to theft

It's smart to label expensive assets and, in general, items that have a higher chance of being stolen. Your 'Property of' asset tag will help as a theft deterrent, but the idea of traceability even more so.

Holding sensitive information

Items holding sensitive information are a category of their own. Just think through the implications before you start labeling e.g. unencrypted hard drives with sensitive information. Sometimes, for security reasons, organizations choose to leave off information that might attract unwanted attention to the assets. Clear manuals or maintenance policies can be a huge help in these cases.

What information goes on an asset tag?

1. ID or serial number, readable by humans
2. Barcode, QR code (or some other type) for barcode scanners or mobile apps
3. Your logo
4. Equipment Name, type and some basic specs
5. 'If found' or 'Property of', often requested by CR customers.

Take your time and think it through here: what needs to be on the label for my organization or database needs?

What numbering system should you use?

The most obvious way to number your assets is using a sequential numbering system, e.g. a simple "Plus One" list of numbers.

Avoid using leading zeros (000001 for example) for your incremental numbering system, because a lot of spreadsheet software drops leading zeros.

Some organizations like to make it a little more specific by including letters, and an alphanumeric structure, like A00123 or C00456. Remember: you can do whatever you want with your system – It's yours!

You could even add meaning to pieces of your numeric code. It could be wise to classify equipment located on the third floor as 003, the fourth floor as 004 and so forth. You could even specify which city the equipment room is in, by using NY003 or LA015 for example.

To help you identify and understand your assets more easily, you could maybe assign CA to cameras, and MI for Microphones, or something like that, followed by a numbering system. But if you're using barcodes, remember that sometimes they may be totally unique, and different from your ideas.

Watch out with certain fonts — Some fonts can be confusing, so be sure you choose a typeface that distinguishes between 0 (zero) and O (letter o), as well as l (lowercase L) and I (uppercase i).

☼ Why is it not a good idea to rely on the tags from the manufacturer?

It may seem like a simple, easy thing to do to use the labels a manufacturer provides. But there are downsides to consider:

- Uniqueness. They're not guaranteed to be unique, either to the piece, or especially to you and your organization.

- Scannability. They might not be readable to your barcode scanner, or compatible with your equipment management apps.

- Placement. They can be put in places that might make sense when manufacturing something, but not while using or scanning it.

Better not to risk it with the manufacturer's labels.

What kind of different asset tags exist?

The barcode is usually the most useful part of an asset tag. The scannable part can be made up of different symbologies that decide how data is encoded and decoded in a scannable barcode.

The most common two kinds of barcode symbologies for asset management are called **CODE 39** and **CODE 128**. These are different from the **EAN (European Article Numbering)** or **UPC (Universal product code)** barcodes found on retail products.

Types of barcodes: 1D barcodes

One-dimensional, or 1D barcodes, systematically represent data by varying the widths and spacings of parallel lines, and may be referred to as linear or one-dimensional. The plain old barcode everyone knows is an example of this.

Code 39

The most common industrial symbology system is Code 39. This system uses alphanumeric characters, and the seven special characters, though letters can be only uppercase.

Code 128

Code 128, on the other hand, supports all 128 ASCII characters. As such, it's more concise and space-efficient, and less subject to problems when scanned. However, it uses four different widths, so these codes require a good quality printer to get right.

Types of barcodes: 2D barcodes

Two-dimensional, or 2D barcodes, systematically represent data using two-dimensional symbols and shapes. They are similar to a linear (1-dimensional) barcode, but can represent more data per unit area.

💡 **The 3 main advantages of 2D barcodes are:**

- their compact size
- can store more data
- can be read from any direction

These are the most common 2D barcodes used for asset tagging:

1. QR codes

(abbreviated from Quick Response Code) are probably the most common form of 2-dimensional barcode. They consist of tiny black and white modules arranged across a square space, and can carry far more information than a simple barcode. They can also be scanned easily using the camera on an ordinary smartphone.

2. Data Matrix

These are similar to QR codes, using black and while "cells" across a small square area. One Data Matrix code can store as many as 2,335 alphanumeric characters. They are favored by the US Department of Defense for much of their internal system monitoring.

Types of barcodes: A glimpse of the future

If you want to try something a little smarter or more advanced than simple barcodes, there are some options for you. Do note, however, that CHEQROOM does not support these types of tags (yet).

RFID (Radio-Frequency IDentification)

These labels transmit their information using an electromagnetic field. So they can be scanned even when they can't be seen, or if mounted inside a piece of equipment, if that makes more sense for the asset in question.

NFC (Near-Field Communication)

Also possible are NFC tags, which can be read by applications on both Android and iOS. Although technically a specialized subcategory within RFID tags, NFC operates at a slightly different frequency and at a higher security level.

BTLE (Bluetooth LE)

Bluetooth LE tags are another option. On the market since 2011, these tags send out a beacon to announce themselves, and can be automatically scanned when placed back in storage if set up properly. This can save you lots of time.

GPS (Global Positioning System)

GPS asset tags are an advanced form of asset tagging, as they can keep track of an asset's location in real time. This gives you the most possible oversight on your equipment, but can also be expensive and complicated to set up. So you'll need to consider where and how you might need to employ it.

Wiliot labels: Intelligent IOT stickers

Perhaps the most next-gen form of asset tagging are Wiliot labels, multiprocessor computers that power themselves by harvesting radio waves. Simply put: they don't need batteries, like other sensors that use Bluetooth to communicate.

Wiliot proudly talks about "connecting everything", and these stamp-sized stickers are pretty amazing indeed. Demand signals show in real time when items or products are picked up, moved or leave the equipment room. Amazon and Samsung have already invested, so you know this tech is the real deal.

Not just for keys: Apple AirTags vs Tile

On the consumer market, two tagging technologies are combatting each other right now: Tile and AirTags.

The Pro is the most advanced of the Tile catalogue, with double the range of the Tile Mate. They are key finders at heart, but can of course be used for other stuff like luggage and gear as well. The Tile Sticker is the adhesive model. Tiles use Bluetooth and are compatible with Android and iPhone.

AirTags are Tile's newest competitor: small metal discs that periodically send messages that can be used to track their location. Their new technology is called ultrawideband, showing the precise proximity between objects. This technology is much more accurate than Bluetooth. So accurate, in fact, that the accompanying app can even point you in the exact direction. Obviously, these tags are Apple-only.

Which material to use for your asset tags?

Which material to use for the label depends on how the equipment gets used, and where it gets used. If it's outdoors and in the field a lot, you'll need something more durable.

Paper

Paper is obviously the easiest and cheapest, but works only under very controlled situations. Manufacturers like Avery, Zebra or Dymo even have some more durable paper-based ones that you can print yourself.

Anodized aluminum

These asset tags are designed with extreme durability in mind and are aimed to withstand the harshest hot, cold or wet environments. For some use cases they are riveted to the equipment instead of attached via adhesives.

Polypropylene or vinyl

These are often more durable and work well indoors or outdoors under moderate conditions and usually have an average outdoor durability of around 2 years.

Tamper-evident labels

It's also a good idea, whenever possible, to use tamper-evident labels. These can add some upfront cost in acquisition and in affixing, but you will save it over time in greater equipment security and theft prevention.

When do you use which type of asset tag?

These different label types vary greatly in price. Mind you: not all low-budget labels will be up to all tasks.

Again, as with all labeling decisions, you'll need to consider the equipment being labeled and the situations it will be in. Durability plays an important factor, especially for equipment that gets a lot of wear and tear.

Even steel tags exist, for really heavy duty conditions. These are not offered by CR yet.

What kind of scanning devices exist?

There are plenty of scanner options as well. Don't forget though: some labels require a certain type of scanner. Usability and portability of the scanning device can be an important factor to consider when choosing a type of label.

Scanners used to scan asset tags work how you'd imagine. You move or swiped these small devices over the asset (or barcode) to collect and potentially add necessary information. Asset scanning devices are used for scanning manually. The label has to be in the scanner's line of sight to scan the most common types of codes.

Portable scanners

Some modern scanning devices still look like typical handheld scanners used in stores or warehouses. Most of them are portable and compact enough to move around for work, and connect through USB or Bluetooth. The user experience sometimes leaves something to be desired though, and they generally don't give more information back than a 'bleep'.

Mobile app scanners

Mobile apps have become great equipment management tools as well, turning your smartphone into a scanner which then connects to your asset management system. Mobile app scanners tend to be more user-friendly and accurate than standard portable scanners. Plus, everyone has one and they fit your pocket. Android phones can even become RFID scanners with the right app.

☼ How do mobile app scanners work?

Mobile app barcode scanners work quite efficiently because of their wireless functionalities. Smartphone cameras have image readers that can decode barcodes and QR codes and deliver that info to a connected device. From there, the equipment or asset management system kicks in, with the user at the controls through either the smartphone or the device.

RFID readers: a specific type of scanner

We already talked about Radio-Frequency IDentification (RFID), which uses electromagnetic fields to automatically identify and track tags. They can carry a significantly larger amount of data than, say, a barcode.

RFID also doesn't require 'line-of-sight'. The reader can pass through many materials, allowing the label to be inside the box. The tags can also take quite a beating and allow for multiple tags to be scanned together.

RFID demands a specific reader. Some Android apps do the trick as well.

How do you create an asset tag yourself?

Now that you know all there is to know about asset tags (or asset labels or whatever you might call them), and you are completely convinced you need to start tagging tomorrow...

Perhaps you would like DIY asset tagging. That is definitely an option, if you make the right choices - and follow these steps.

Classify your equipment by type, model and category

You have plenty of choices on how to categorize your assets. By teams, departments, usage or equipment type. Don't go crazy with the inventory: consumable items like tape and cartridges don't need to be labeled because of their short lifespan. But think twice about hard disks holding sensitive information. Your higher-value pieces or often-used movable assets are a good place to start.

Give it an ID number

Feel free to use the numbering systems from chapter 7 to uniquely identify each and every asset you've classified and deemed fit for labeling. Make sure every asset has a different number, and stay consistent. Keep in mind that your DIY choices could be limited by the type of label you decide to go for.

Pick a tag type

You know the range of labeling options. Now it's time to figure out your needs, how and how often your equipment is used, how expensive your assets are, how much info you need on the label and what kind of data you want from it.

Let chapter 8 guide you.

Add the information you want

Here's where it gets really interesting. Create the tag and add the necessary information to it, according to the tag type you chose and the equipment management system you are using to read and process the data. The model, manufacturer, serial number and the department to which the asset belongs are usual suspects.

Place the tag on the item

Time for the ultimate step: applying the label. This will depend on whether you want to go for a classic adhesive sticker, or a more robust solution. Perhaps even a semi-permanent tag is an option.

Final quality check… and repeat

After a final quality check, you are good to go (and tag another 100 items). Keep the same process up, and consistent asset tagging will reward you in the end.

☼ Where do you place your asset tags?

You need to make sure not to impede the functioning of the device, but also make it fairly easy to reach for scanning when you need to. What makes sense for one piece of equipment, doesn't necessarily make sense for another. For some assets like laptops, screens, headphones or microphones, the esthetics of your device might even come into play.

DIY Label printing: popular Zebra labels

One of the more popular label printer brands is Zebra. Their products are like the PDFs of label printing. They make asset labels and tags ranging from standard paper to highly durable synthetics. You can spot them on equipment all around the world, and they also work great with CHEQROOM.

Which types of printers & labels does CHEQROOM support?

CHEQROOM's asset tags and labels cater to both DIY equipment managers as to slightly more advanced needs.

You can use existing barcodes or choose from a variety of shapes and sizes of high-quality asset tags from our store.

Print labels yourself

Use CHEQROOM to create your own asset labels to meet the equipment and application requirements of your business. Print them on a Dymo LabelWriter, Zebra printer or on plain Avery-style label sheets.

Choose from our selection

Or you can choose from a variety of shapes and sizes of high-quality asset tags and labels from our store. We have dot labels, mini labels, cable labels, key tags and more, in polyester and laminated vinyl, with barcodes, QR codes and datamatrix codes - all perfectly synced of course with CHEQROOM's equipment management system.

How do you remove an asset tag?

Should you ever have a reason to remove asset tags, there are different methods to try.

Some adhesive tags are specially designed to be peeled off again years later and withstand multiple uses. For more basic stuff, special solutions exist to remove paper labels and what they leave behind. Others use nail polish remover, hot air guns, plyers and white spirit to remove metal tags, but we don't recommend getting so rough on your equipment.
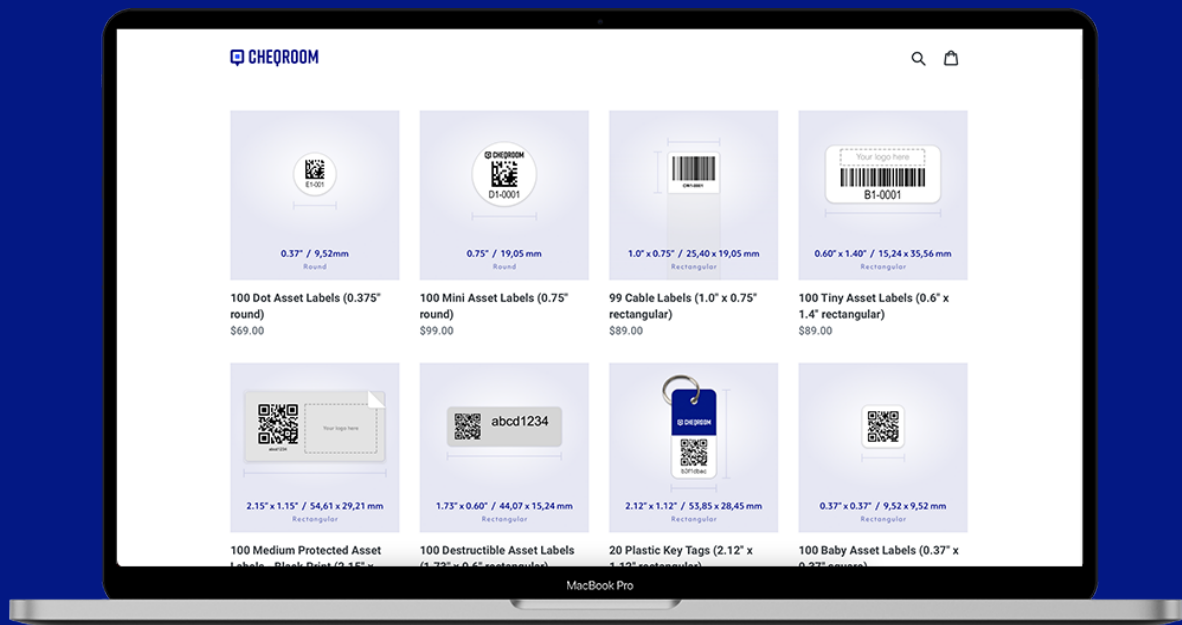
In general, thinking ahead is key. You could foresee a sloppy removal process by choosing wisely. Semi-permanent (metal) labels might be something to consider.

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Choose from a variety of asset tags in the CHEQROOM Asset Label Store.

View Asset tags →

CHEQROOM is the #1 equipment software for makers on the go. It gives you full visibility of your frequently moving expensive equipment, it holds users accountable and provides insight into the usage & condition of all your items. Wherever you are. Whenever you want.

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