



Plant and Package tracking

A best practices guide for Metric tags

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Elements of a Metrc tag

1. **Facility Name:** Located at the top of the tag and pre-printed prior to shipment*
2. **Order Number:** Associated with tag orders placed through Metrc**
3. **Facility License Number (Facility ID):** Denotes the ID issued once a business is licensed to operate***
4. **Location:** Physical location of the regulated environment, such as a state, district, or territory
5. **HEX ID:** An assigned alpha-numeric unique identifying number (UID) used to locate the associated tracked item within the Metrc system
6. **Barcode:** An alternative way to access information contained on the tag, this feature can be used in conjunction with the dynamic location-based capabilities of the RFID solution
7. **Product Classification:** Tag color and name classifications include:
 - Cannabis - Blue – which is often referred to as adult use or recreational.
 - Medical - Yellow
 - Hemp - Pink
 - **Note:** Some states may vary and only provide one universal tag color.



*The facility name is the license facility name issued by the state licensing department.

**Metrc Support will require this number when addressing any potential issue with a tag order.

***The facility license number is issued by the state licensing department once a business is granted access to operate in the state. If a business operates in multiple physical locations, each will require a unique facility ID.

RFID performance key factors

RFID-enabled systems offer numerous advantages over barcodes, and manual data capture, including significant time savings for inventory control, reduced human error, and increased workflow efficiency. For these benefits to be realized, keep the following elements in mind when tagging plants and packages to achieve optimal performance.

Distance	<p>The first factor controlling the read distance is the size of the RFID tag's antenna. The 0.75" x 3.5" antenna used in Metrc tags for plants and packages has an average maximum read distance of 40 ft.</p> <p>Most operators find a read range of 15 ft – 20 ft can be achieved throughout their facilities (i.e. cultivation and warehouse environments).</p> <p><i>Note: To achieve maximum distance, the tag must be attached properly and unaffected by other controlling factors such as metals, liquids, placement, and directionality.</i></p>
Directionality	<p>The way a tag is facing may change the read distance of a tag. Each tag has a front and back side. The view in which a user reads the tag may change the distance of which an RFID reader will read the tag. For optimal readability, the front or back should be facing out and clearly visible.</p>
Metals	<p>The inlay found in Metrc RFID tags is comprised of a lightweight metal. Readers work by sending out radio frequency energy that is reflected by the tag back to the reader. This means other metals can subsequently disturb or deflect the limited amount of energy sent by the tag. Stapling or the use of paper clips and/or binder clips as attachments is not recommended as the metal may disrupt tag readings. To ensure optimal performance, it is recommended to limit the use of metals around the tags or to position the tags away from metal objects to minimize interference</p>
Liquids	<p>Radio frequency energy can pass through many materials. However, liquids are one form that absorbs the energy needed to read the tag. Light moisture, such as the water from drip or spray feeding systems, does not often cause issues with readability. Avoid large volumes of water, such as reservoirs, between the reader and RFID tags.</p> <p><i>Note: This includes inventory products such as extracted oils, infused liquid products, etc. For best read results, ensure RFID scanning occurs on the tag side and do not attempt to scan a tag through any liquid.</i></p>
Placement	<p>If a user places two or more tags directly on top of one another the antenna in the tag may be "detuned" causing the tags to be unreadable. A minimal separation, such as 1 to 2 centimeters, is sufficient in preventing the detuning of the tags.</p> <p><i>Note: The detuning of a tag is not a permanent state and only happens while the tags are touching. Detuning means that a tag has a higher error rate.</i></p>

Best practices for tracking plants and packages

Package tags

RFID-enabled systems offer numerous advantages over barcodes, and manual data capture, including significant time savings for inventory control, reduced human error, and increased workflow efficiency. For these benefits to be realized, keep the following elements in mind when tagging plants and packages to achieve optimal performance.

- **Ensure tags are clearly visible:** RFID-package tags should be attached in a visible location where the tag can be easily seen and scanned.
- **Keep 1-2 inches from other tags for optimal performance:** For best results, RFID tags should not be placed over the top of or within 1-2" of one another. **Note:** a minimal distance of 1-2 centimeters is needed to avoid detuning (as stated above).
- **If re-using packaging, remove the old tag completely:** If the old tag remains attached it can cause inventory discrepancies, among other issues.
- **Avoid using metal:** Packaging or containers such as metal boxes or any packaging, including bags, sheet pans, or any containers that use a foil lining may detune the tag, impact readability, or cause errors.
- **If using clear containers, ensure tag is visible:** Securely attach the tag to the outside, and in plain view, of clear plastic bags or plastic containers for optimal RFID readability.



Package tagging – clearly visible

Did you know?

Package tags can be separated into two pieces – one piece with the License ID, RFID antenna, and barcode, and the second (smaller half) includes just a barcode. This is the same barcode for both tags; therefore, allowing the use of a secondary barcode on the same product. The detachable bottom half of the package tag is for discretionary use but can be used for retail/dispensary or testing facility use.

Regulatory notice: The workflow for separating the two elements of a package tag is determined by the respective state's rules and regulations.

Plant tags

- **Ensure tags are clearly visible:** Tags must remain visible and in clear view this will help with faster inventory audits leveraging RFID scanners.
- **Tagging during the vegetative phase:** When plants reach a viable height/width – which is determined by state rules and regulations – plants can be assigned to the vegetative phase in Metrc and a plant tag must be affixed to each individual plant, like a stake, to hold the tag upright in the growth medium.
- **Tagging during the flowering phase:** When plants reach this growth stage, the tag should be securely and visibly fastened, with a Metrc strap (or zip tie if straps are not provided), to the lowest branch at the bottom of the stalk where the tag does not touch the growth medium.
 - **Regulatory notice:** Review state rules and regulations for any specific requirements regarding plant tag placement.
- **Do not let tags sit or lay in the growth medium:** Tags on larger plants should not be left in the growth medium and should never be covered by soil as this can impact readability, slow down audits, or cause inventory discrepancies.



Flowering phase tagging

Metrc straps

- **Recyclable straps with multiple uses:** Blue recyclable straps are available, for most states, and can be used multiple times to help properly tag and identify individual plants within the vegetative or flowering phases. Straps are supplied with a plant tag order.
- **If your state does not use Metrc straps:** In this case, it is a best practice to tag a plant with a zip tie, or similar object, that does not use metal (i.e. staples, paper clips, or binder clips).
- **Using the strap as a stake:** Only use this during the vegetative phase to not impact/damage the root system in later growth phases. To use it as a stake, thread the strap through the top and bottom holes as shown in the picture to the right, place it into the growth medium, and ensure the tag is not touching the growth medium.
- **How to use the strap multiple times**
 - When using a Metrc strap for the first time, simply loop the strap through one of the two punched holes on either end of the tag and around the lowest branch (keeping the tag out of the growth medium). Secure the strap by inserting the notched end through the hole in the strap and only use the first notch. This will allow for multiple uses.
 - To reuse a plant strap, (for example, repositioning the tag after pruning) simply detach the strap by cutting it after the last notch to open the strap and release the tag. There should be several notches left on the tag for reuse. Ensure the strap is in good condition to reuse and if so, loop the tag through the strap and re-attach the strap to the respective plant as needed. This process can be repeated up to four times per strap. **Note:** While the strap may be re-used, the Metrc plant tag should not be re-used on any other plant.



Using the strap as a stake – vegetative only

If you are in need of additional support, please contact Metrc support by logging into the [Support Portal](#).



Metrc is the most trusted and experienced provider of cannabis regulatory systems in the United States. Our solution combines advanced software, radio-frequency identification (RFID) technology, a dedicated customer-support team, and a secure database to track and trace cannabis from growth, harvest, and processing to testing, transport, and sale. Metrc serves more than 400,000 users, including growers, manufacturers, testing facilities, transport providers, dispensaries, state regulators, and law enforcement officials across 23 states, the District of Columbia and Guam. We are proud to play a leading role in ensuring the safety and security of the nation's legal cannabis market.

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